Setting the Records Straight

A Study of Hospital Medical Records
The Audit Commission

...promotes proper stewardship

of public finances and helps those

responsible for public services

to achieve economy, efficiency

and effectiveness.
Setting the Records Straight

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Preface

The Audit Commission oversees the external audit of local authorities and agencies within the National Health Service (NHS) in England and Wales. As part of its function the Commission is charged with reviewing the economy, efficiency and effectiveness of services provided by those bodies. To this end, studies and audits of selected topics are undertaken each year.

This study of medical records is concerned with the content of records, the way they are stored and distributed, and the overall management of medical records within hospitals. It also reviews some possible developments, although without dealing with issues of information management and technology in general, which are the subject of a separate report to be published later this year. Arrangements at some 20 hospitals were reviewed in some depth, with short visits at a further 20. Local audits are now underway and will be carried out at many acute hospitals in England and Wales during the next few months.

The study was carried out by Graham Cuthbert, Heather Walker, Anne Stuart and David Gilburt, and coordinated by Ken Sneath with support from David Browning and Dr Jonathan Boyce in the latter stages. Early drafts of the report were edited by Christine Hogg, with production of the final report managed by Jane Laughton. Analytical support was provided by Debra Jackson and Kevin Akers. Lorraine Nicholson of the Health Services Management Unit, University of Manchester, provided additional advice throughout. The study was supported by an advisory group (Appendix 1). The Audit Commission is grateful to all individuals and organisations who contributed to this study, especially the hospitals who received the study team during the course of the study. Responsibility for the contents and conclusions rests with the Commission alone.
Introduction

1. Accurate information is essential for the proper care of patients and effective management of the National Health Service (NHS). Information about the clinical care of hospital patients is recorded in their medical record or 'casenotes'. This includes the presenting symptoms, the results of diagnostic investigations, the diagnosis itself and the record of treatment. Casenotes assist with the effective care of patients and document each episode of care for future reference. They provide a communications channel between different professionals in the hospital and in the community. This report is concerned with the use of casenotes in hospitals.

2. Casenotes also serve wider purposes. They provide a record that can be used for teaching, research and clinical audit as well as evidence in the event of litigation. They are an essential source of managerial, financial and statistical information for the day-to-day running and future planning of the NHS (Exhibit 1).

Exhibit 1
The role of medical records or casenotes

Casenotes are used for many different purposes.
3. Recent reforms of the NHS are making the role of hospital casenotes increasingly important:

- Clinical audit is now a requirement throughout the NHS and it depends on accurate and comprehensive records.
- Some clinical care previously available only in hospitals is now being provided in the primary sector, as GPs – particularly fundholders – take on greater responsibilities. The need for speedy and accurate exchange of information between GPs and hospitals has consequently increased.
- Payment for clinical activity as part of the NHS internal market requires accurate records of the procedures undertaken.
- Casenotes are no longer the personal records of doctors. Clinicians increasingly want to share records with their patients. The Access to Health Records Act 1990 has given patients a general right to see their medical records. The right for women to see records during pregnancy and hold them was reiterated in the Maternity Charter published in April 1994.

4. Casenotes began as personal aids-mémoire for doctors who often had caseloads spread across several hospitals. They gradually took on additional, mainly non-clinical, roles to attain their current status as a document of record. As they grew in number and importance, it became essential to manage and organise them effectively. Medical records departments were established.

5. At the heart of any medical records department is the library, which typically stores 200,000 sets of casenotes. A shortage of space may mean that casenotes are stored in several different places. Library staff assist clinicians and others by providing casenotes when needed and storing them when they are no longer in use. They sort and organise their contents, filing additional entries and passing on information for other purposes as necessary – such as the compilation of statistics.

6. Other staff, not necessarily linked to the medical records department, assist clinicians wherever casenotes are used. Ward clerks record information on inpatient wards. Other clerks help in accident and emergency (A & E) departments and in outpatient clinics. These staff may carry out related tasks such as keeping waiting lists, making appointments, admitting inpatients and receiving outpatients. They collect and collate data for national and local statistics, and for statutory and contractual reports. Pressures have been increasing as a result of healthcare reforms and other changes, such as waiting list initiatives and the increasing use of day surgery. These core services alone
cost the NHS well over a third of a billion pounds a year (Exhibit 2). But many other people including medical secretaries, nurses and doctors also spend a considerable time looking after casenotes and keeping them up to date.

7. A 'typical' district general hospital of 600 beds on an 'average' day handles:
   ♦ 120 new inpatients;
   ♦ 160 new outpatients;
   ♦ 40 day case patients;
   ♦ 450 outpatients who have attended before; and
   ♦ 200 new attendances at the A & E department.

Most of these episodes of care require casenotes.

8. Despite considerable expenditure on casenotes, it is clear from recent criticism of the service that all is not well. The National Confidential Enquiry into Peri-operative Deaths in 1993 reported that 'the loss or difficult retrieval of information and casenotes in hospitals is still a major problem for the Enquiry, and there are no signs of improvement'. In 1993 the Health Service Commissioner stated that 'inadequacies in clinical as well as nursing records provide a recurring theme in my reports. I still find examples of undated, untimed or illegible entries and in some cases no entry at all about events that prove to be significant... All too often I find that the quality of care... has been damaged by failures to pass on or record important information'.

9. The Commission has reviewed arrangements in a number of hospitals in England and Wales to assess the extent of any problems and inadequacies. It has sought to evaluate how well-placed medical records departments are to take on new challenges. This report sets out the findings. Chapter 1 looks at the quality of individual casenotes. Chapter 2 examines arrangements for ensuring that casenotes are available when and where needed. Both tasks require effective management if they are to be done well, and in Chapter 3 the management arrangements needed for medical records departments are reviewed. Finally, Chapter 4 describes opportunities presented by alternative approaches and new technology. It is important that the medical records service provides effective support to clinicians and managers alike if the modern NHS is to function as it should.
Casenotes are complex documents that need a clear structure; while some are satisfactory, others have major flaws.

Too many are ‘fat’, cluttered and untidy and should be culled and sorted periodically.

Many hospitals keep more than one set of casenotes per person, making coordination of care difficult.

Coding of data to produce information for research, planning and the contracting process needs to be more accurate.

1 On the Record: The Contents of Casenotes
10. Casenotes are complex documents that contain a variety of separate pieces of information. The way that this information is grouped within the casenote folder varies between hospitals. Although the 1965 Tunbridge Report (Ref. 1) called for a common approach, many different casenote structures are still in use and at some hospitals there is no structure at all. Exhibit 3 shows the typical contents of a set of casenotes and an example of how they can be structured.

Exhibit 3
Content of a set of casenotes

An example of how documents in casenotes can be filed in a structured way.

Source: Audit Commission.
11. Over the years a number of organisations have commented on the content of casenotes and issued guidance on standards – for example, the General Medical Council is currently revising guidance to doctors which includes good practice in the maintenance of records (Ref. 2). As part of this study the Audit Commission invited a group of professionals to distil a set of good practice principles from this guidance, summarised below (Exhibit 4, overleaf):

♦ the patient should be clearly identified, and the casenotes should set out the diagnosis, history, treatment results and care plans;
♦ notes should be kept neat and tidy with legible entries signed and dated, preferably in black ink;
♦ they should be kept up-to-date and filed with the most recent on top;
♦ casenotes should have a clear structure which is agreed with users and should be organised into sections;
♦ there should be a policy determining which documents should remain in the casenotes after discharge (culling); and
♦ there should be one set of casenotes for each patient.

12. In practice the study found problems in four main areas:
♦ record-keeping does not always meet standards set by professional organisations representing clinicians;
♦ many casenotes do not have a logical structure;
♦ even well-organised casenotes can become too fat and unwieldy; and
♦ many sites keep multiple sets of casenotes for the same patient.

In each area there are, however, potential solutions.
The principles of good practice for casenotes

A group from various professions has distilled a set of good practice principles...

- The patient should be clearly identified and the casenotes should set out diagnosis, history, treatment, results and care plans
- Casenotes should be kept neat and tidy with legible entries signed and dated, preferably in black ink
- They should be kept up-to-date and filed in chronological order with the most recent on top
- Casenotes should have a clear structure which is agreed with users and should be organised into sections
- There should be a policy determining which documents should remain in the casenotes after discharge (culling)
- There should be one set of casenotes for each patient

Source: Audit Commission.

Standards of record-keeping

13. The principles of good practice drawn up by the group of professionals were tested against 200 sets of casenotes. From this it was clear that basic standards were not always being met (Exhibit 5).

Casenote structure

14. Only half of the casenotes examined had an index and a clear structure. Yet these are essential if doctors are to use them for easy reference when treating patients. Badly organised casenotes which are not filed chronologically or by episode are virtually useless for this purpose. Well-organised and indexed notes will encourage users to file any additional entries tidily.

15. To meet the standards put forward by professional bodies, hospitals should agree a 'casenote architecture', such as that illustrated in Exhibit 3. They should provide clear guidelines for their staff regarding the content and order of casenotes, with equally clear expectations that they will be met. They should also ensure that someone is responsible for making sure that the agreed architecture and guidelines are adhered to.
Exhibit 5
Quality of record-keeping

...but a survey of hospital casenotes showed that standards are not always being met.

Fat casenotes

16. Casenote files are becoming fatter for a number of reasons:
- new types of documents are being generated (for example, more nursing notes as a result of the development of the nursing process);
- fear of litigation means that doctors are reluctant to discard any documents, whether relevant or not; and
- more tests are being carried out on patients and the results are often produced on large computer printouts. Some of these, such as temporary result sheets for pathology tests, should be discarded when a cumulative report is produced but often are not.

17. The Audit Commission found that nearly half the casenotes examined were fat and disorganised. They were often stuffed with working documents such as temperature and fluid balance charts and other documents of no relevance for future care or as a matter of record. Clinics with 20 or 30 people attending can sometimes have piles of casenotes several feet high. Any information that
might be required in the event of future litigation should be summarised in the history sheets, nursing notes or discharge summaries.

18. A further survey of casenotes in 15 hospitals carried out by the Audit Commission found that the average thickness of files varied significantly. The Department of Health's guidance on facilities for storing files (Ref. 3) suggests that the density of files should fall within the range of 80-120 casenotes per metre run of shelving. The survey found a threefold variation in the density of files (Exhibit 6).

19. Casenotes can be made more manageable and usable by 'culling' – that is by removing less essential material for disposal or separate storage. The Tunbridge Report recommended dividing files into primary, secondary and transitory documents. Primary documents were to be kept on the main file, secondary documents stored separately and transitory documents thrown away. Although four out of five of the departments surveyed had policies on these matters, many were not implemented because of the staff time required or for other financial reasons. Typically, all pieces of paper produced during an episode of treatment were filed and in nearly three out of five hospitals casenotes were not culled regularly.

Exhibit 6

**Average number of casenotes in one metre of shelving**

The survey found a threefold variation in the density of files.

*Source: Audit Commission survey at 15 hospitals.*
Where a proper policy has been introduced, there can be a dramatic improvement in the quality and usefulness of casenotes. For example, Letterkenny General Hospital in Donegal, Republic of Ireland, has significantly improved its casenotes, slimming them down considerably (Case Study 1). This approach, first proposed in the 1960s, should be adopted by all NHS hospitals.

**Case Study 1**

**Letterkenny General Hospital**

Clinicians in the hospital were concerned about the growth in the size of casenotes. They agreed to divide them into a primary file containing clinical notes and test results, and a secondary file for all other documents. The secondary files were to be stored separately, although retrievable at any time. A new cover and filing structure was introduced for the primary file.

The changes were to have been introduced specialty by specialty, starting with diabetic clinics where large files presented a particular problem. But the improvement in the quality and usefulness of the casenotes was so marked that the project was quickly extended to include all specialties.

Any existing casenotes for new admissions were converted to the new format before being sent to wards, and for each clinic the ten bulkiest casenotes were converted at the preparation stage before the start of the clinic. Conversion was time-consuming, adding two hours to the time taken to prepare casenotes before a clinic. Bulky files each took ten to 20 minutes to split. The front cover of the primary file was used to indicate the existence and location of any secondary file.

Since the introduction of the system 10,000 secondary files have been stored. However, in one year of operation only five have been recalled. Among other benefits:

- clinicians have found casenotes in the agreed standard structure much easier to use;
- the reduction in size of primary files - by as much as 60 per cent – has meant that transport and storage of casenotes at clinics is much easier;
- storage space required for primary files has been almost halved, improving access and working conditions for medical records staff; and
- tidier, more usable casenotes have encouraged staff on wards to keep them that way.
21. The Tunbridge Report recommended a single set of casenotes for each patient to ensure coordination of treatment and minimisation of administrative costs. But sometimes different clinical groups or medical specialties prefer to keep their own separate casenotes. This is particularly true of psychiatry and genito-urinary medicine where absolute confidentiality is a fundamental requirement. However, other specialties such as ophthalmics, ENT and obstetrics also often keep their own casenotes. Of 16 hospitals visited by the Audit Commission only four had a single set of casenotes for patients. Twelve had more than one set of casenotes and two had six specialties that kept their own casenotes (Exhibit 7). Worryingly, at three hospitals individual directorates were contemplating whether to keep their own casenotes because of a poor service received from the central library.

22. Multiple sets of casenotes accumulate for a number of reasons. The main reason is accessibility of information – an unstructured set of casenotes covering all specialties makes it difficult for doctors to find what they need. Single specialty casenotes are easier to structure and maintain. Another reason may be increasing frustration among doctors who find that shared casenotes are not available when needed from the central library. The geography of the hospital, especially if there is more than one site, can exacerbate this problem. Whatever the reason, doctors and managers should discourage multiple sets of casenotes wherever possible. However, the underlying problems must be tackled if the use of a single set of casenotes is to gain general acceptance.

23. Records held by A&E departments are a valid exception. Patients who attend A&E are often not local residents and visits may be ‘one-offs’. A&E departments usually hold a single card for each attendance which they store themselves. If the patient is admitted, A&E records can be photocopied and put into the main hospital casenotes.
Consequences of poor record-keeping

24. There are serious consequences of poor record-keeping, namely:

♦ patient care may be compromised;
♦ the hospital loses protection against negligence claims; and
♦ the quality of coded information suffers, thereby jeopardising the contracting process and clinical audit.

Adverse effects on patient care

25. Poor casenotes can be dangerous to patients. If different specialties hold separate casenotes for the same patient, doctors cannot be sure that they are reviewing the whole medical history and they may miss vital information on drugs and allergies. Even in hospitals where only one set of casenotes is used patient care can be jeopardised by missing information on operations or tests – or even whole episodes of care.

26. The quality of care that a patient receives will also suffer from poorly structured casenotes. Disorganised files lead to unsatisfactory consultations in outpatient clinics where doctors either overrun the time for the consultation or have to ignore the notes if it is impractical to search through them.

27. If the results of investigations are missing or cannot readily be found, the patient may have to undergo the tests again. This is inconvenient and risky, especially for invasive tests and x-rays, and also wastes money and the patient's time.

28. Communication between the hospital and the patient's GP can also suffer from poor casenotes. The Audit Commission's survey found that half of all discharge letters did not contain details of medication and nearly half of those that did were illegible. Accurate and up-to-date transmission of information between the hospital and the primary care team is essential for the continuity of care. Achieving this is difficult in any circumstances, but poor hospital casenotes magnify the problem.
Inadequate protection against negligence claims

29. Hospitals need good records if they are to defend themselves against claims of negligence made against them. Figures produced by a large insurance company show that 35-40 per cent of all malpractice claims in the United State cannot be defended because of ‘documentation problems’ (Ref. 4). A defensible record needs to be legible, accurate, timely and comprehensive. The Audit Commission survey found that more than a quarter of doctors’ notes (history sheets) failed this test.

Poor quality of coded information

30. Casenotes provide data and information for many purposes including audit, research, planning, managing and monitoring contracts. For most of these purposes the data must be aggregated. This means that many data items, such as diagnoses, must first be assigned a code.

31. Coding is normally carried out by specialist clerks working in the medical records department. It must be done accurately because statistics may be distorted and a trust may lose income if activities are not recorded or if the coding is not done shortly after the patient is discharged.

32. The Audit Commission carried out a survey of coding in the hospitals visited and found that it was sometimes inaccurate and late. Discharge summary sheets often contained insufficient information for accurate coding when compared with the clinical history sheets. The most common problems were:

♦ failure to code secondary conditions such as hypertension and hypothyroidism that were probably germane to the treatment and length of stay. (The record of these conditions in the history sheets was not always reflected in the discharge summary or front sheet.); and

♦ delays in the coding process. On average only 40 per cent of coding in the hospitals visited was completed within four weeks of discharge.

33. In 1982 the Korner Steering Group on Health Services Information made recommendations for coding data that continue to be highly relevant:

♦ doctors should record diagnostic data in ways that facilitate the coding process, for example, by using a structured discharge summary;

♦ coding of diagnostic and therapeutic data should be organised at a local level so that those responsible have easy access to the doctors who recorded the data; and

♦ appropriate training should be given to those responsible for diagnostic coding.

34. Accurate coding requires the active involvement of doctors in defining precisely which services were provided. They will only become more involved if they see the benefits of doing so. One benefit is the accuracy of information
1 On the Record

for clinical audit and research purposes. Another is securing the trust's income which increasingly depends on the accurate recording of activity. It is vital that doctors accept their responsibility for producing clear statements of diagnoses and procedures in the discharge letter or clinical summary. Samples of documents produced by junior medical staff should be checked regularly by a more senior member of the medical team and doctors should be involved in validating the codes assigned by coders. This requirement should be identified in consultants' job plans and time should be allowed for carrying it out.

35. Management arrangements for coding vary. In most hospitals visited coding was organised centrally, with coders based in the medical records department and accountable to the coding manager or medical records manager. Coders had little or no contact with doctors. In other hospitals coders worked in clinical directorates as members of the team or medical secretaries carried out the coding for their consultants.

36. Centralised teams tended to code more sets of casenotes per head (Exhibit 8), but the coders based in clinical directorates were closer to doctors and had potentially more chance of achieving greater accuracy. Also, some centralised coders complained of being too rushed to do a good job. There could, therefore, be a trade-off between cost and accuracy – although more detailed research is required. The best model may be a hybrid one whereby coders working for a centralised team are allocated to specialties but continue to be supported, monitored and trained centrally.

37. The Audit Commission found inefficiencies in some hospitals where coding was, in effect, being done twice. Staff were being employed to code records for clinical audit whilst others were coding the same records for contracting and information purposes.

38. Training is also crucial. Even where casenotes are accurate and well-structured, coding can go badly wrong if performed by those with

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Exhibit 8
Effect of centralisation or decentralisation on the productivity of coding clerks

Centralised teams tend to code more casenotes per head.

Activity = Total number of day cases + discharges + deaths + well babies

Source: Audit Commission.
insufficient experience or training. Thorough training is required for coding staff backed by audits of data quality with the results fed back to managers and staff. Doctors can help, providing training, resolving problems and assisting with data audit by validating codes against diagnoses.

39. Current national developments should result in a more consistent approach to coding:

♦ In England the Clinical Coding Support Unit of the NHS Executive was established in 1990. Regional clinical coding tutors have been appointed and a national management development programme for coding managers has been devised. A Clinical Coding Toolbox has been produced that includes a list of sources of help, model discharge summaries and results of a survey of encoding products.

♦ In Wales the Information and Information Technology Strategy published in 1989 identified the need for better training for coding staff. A clinical coding tutor was appointed in 1991 and, as a result, all coders have received full basic training. Regular meetings and workshops for staff within hospitals have been held by tutors at the Welsh Health Common Services Authority. There is also a help-line for queries.

♦ The Institute of Health Record Information and Management (IHRIM) organises clinical coding proficiency examinations to promote the training of coders.

40. Hospitals are not alone in needing to pay close attention to the accuracy of coding. Health authorities and GPs must ensure that the treatments they are purchasing are not overstated. It is in their interests when contracts are agreed to see that the necessary monitoring mechanisms are in place. This can be done by ensuring that providers have effective internal checking mechanisms and by carrying out (or commissioning others to carry out) their own audits of coding quality. The NHS Executive has recognised this need in developing the data accreditation process for acute providers. The accreditation establishes that principles of good data management are in place and tests the quality of data.
Recommendations

1. Hospitals should agree a ‘casenote architecture’ setting out the optimal content and order of casenotes.

2. They should provide clear guidelines and standards for all their staff, including doctors, based on professional good practice. Performance against these standards should be monitored.

3. They should introduce policies for ‘culling’ casenotes periodically, separating and storing less important material separately.

4. They should aim, so far as possible, to have only one set of casenotes for each patient.

5. Those undertaking coding should be properly trained.

6. Doctors should take responsibility for producing clear statements of diagnoses and procedures and should participate in validating the coding process. This requirement should be specified in consultants' job plans and time should be allowed for carrying it out.

7. Hospitals should review their management arrangements for coding to reach an acceptable balance between efficiency and quality.

8. Purchasers should check coding arrangements and coding quality to ensure that they are getting what they pay for.
National Report

Medical records departments provide casenotes to clinicians on request and retrieve them for storage when an episode of care is completed.

The first task is to find the casenotes. Some will be in the library, others will not be on the shelves, but found eventually, and a few will not be found at all – jeopardising care. A proper system for tracing and tracking casenotes is required. Closed libraries appear to have fewer casenotes not traced out.

Libraries need systematic procedures with overcrowding reduced through a combination of 'culling' – the process of removing unwanted material from casenotes, described in Chapter 1 – and 'weeding' - the removal of whole casenotes from the system for archiving, for example, if the patient is dead. Many hospitals have more than one main library which complicates matters.

Finally, unless casenotes are stored and moved under a proper set of arrangements, the security and confidentiality of the information they hold can be put at risk.

2 The Paper Chase: Issuing and Retrieving Casenotes
41. Medical records departments provide casenotes to clinicians on request and file them when treatment is completed. The process involves a number of steps (Exhibit 9). First, the lists of casenotes required for clinics, inpatient admissions or day cases are obtained. The casenotes are 'pulled' (removed from the library) and a record is made of their destination. Casenotes for emergencies are usually issued immediately and individually. Missing notes and missing items are chased and — it is to be hoped — found. They are then issued to the ward, clinic or department concerned at the appropriate time. During the treatment or consultation, entries are made in the notes by doctors and requests for diagnostic investigations are recorded. When the patient has been discharged or the clinic has been completed, the casenotes are retained by the users while summaries are made by doctors and letters sent to GPs. Copies of these are placed in the casenotes. The notes are then returned for sorting, coding and filing. The issuing and retrieval of casenotes is the subject of this chapter.

42. The first task of finding the casenotes is by no means trivial. Missing files present medical records staff with one of their most intractable and time-consuming problems. In a sample of 123 clinics in the hospitals visited during the Audit Commission's study over 3000 sets of casenotes were required. Of these 64 per cent were available in the main library for immediate use, but 36 per cent were elsewhere. This did not mean that a third of all
...the worse the problem, the less time staff have available for planning and reorganising in order to remedy it'

Casenotes were usually out of the library. Casenotes requested for clinics were more likely than other types of request to have been in recent use; for example, during a preceding inpatient episode. Of these, most were relatively straightforward to find because their whereabouts had been recorded. But five per cent were 'not traced out' – that is, there was no record of their whereabouts.

43. Faced with such situations, staff in medical records departments have to use their ingenuity and try to work out where casenotes might be. Sometimes they have to resort to a search through the hospital. Occasionally, all staff in the medical records department have to interrupt their work and go in search of a missing set of casenotes.

44. The amount of time spent hunting casenotes can be significant. Of the casenotes in the Audit Commission's sample the 64 per cent in the library took just 30 per cent of the total time spent assembling notes for the clinics. Those not in the library but whose whereabouts was recorded took 61 per cent of the time, and those 'not traced out' took nine per cent of the time. Thus casenotes not in the main library took, on average, five times as long to find as those that were (Exhibit 10).

45. In some hospitals as many as one in six sets of casenotes is still not available when the outpatient clinics start (Exhibit 11). Most are found before the clinic ends, but staff have to spend time searching for them and patients may have to wait to be seen. There may be knock-on effects on other clinics if staff are taken away from other work to trace missing casenotes. And the worse the problem, the less time staff have available for planning and reorganising in order to remedy it.

46. If a patient's casenotes are not found at all, the consultation may have to be cancelled and the patient sent home having made a wasted journey. For surgical inpatients, operations may be postponed because of the risks of not knowing a patient's previous history. Continuity of care may be jeopardised.

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Exhibit 10
Where casenotes are found and how long it takes to find them

Casenotes that were not on the shelves took five times as long to find.

Source: Audit Commission survey in 12 hospitals.
Exhibit 11

Casenotes missing from outpatient clinics

Up to 14% of casenotes are not available at the beginning of the clinic...

...but most are found before the clinic ends.

Source: Audit Commission at 16 hospitals.

due to poor communication between health professionals. If doctors make decisions about treatment or discharge without the casenotes, their credibility may be undermined in the eyes of the patient. Sometimes an attempt may be made to reconstruct the clinical history, which is usually frustrating, embarrassing and a waste of time for the doctor and the patient alike. Duplicate sets of casenotes may be opened, adding to the confusion.

47. Clinical audit may be biased if casenotes are unavailable. An audit of casenotes at one hospital, which was undertaken to detect antenatal risk factors and review the subsequent clinical action, found that 6.4 per cent were missing. This might not have mattered were it not that the missing casenotes related to women who experienced significantly worse delivery outcomes than other mothers whose casenotes could be traced. The researchers consider that this was almost certainly due to a tendency for doctors to hold on to 'interesting' clinical records for research or discussion (Ref. 5).

48. How easy it is to find casenotes depends on:
♦ the sheer number of casenotes in circulation within the hospital coupled with whether there is a robust 'tracing' or 'tracking' system;
♦ whether the library is 'open' or 'closed';
♦ how well stores are organised; and
♦ whether the hospital has a retention and destruction policy which has been implemented.

49. In any one month an average-sized hospital will have 10,000-20,000 or between five and ten per cent of its current casenotes in circulation. Large numbers of files are dispersed around the hospital because casenotes are often retained by doctors for research or to complete discharge summaries. It is important that medical staff and other health professionals do not hold patients’ casenotes unnecessarily - otherwise a vicious circle begins where other
doctors, finding casenotes are not easily available, begin holding on to files for themselves (Exhibit 12).

50. If the casenotes are not in the library, it should be relatively straightforward to find them - provided a proper record has been kept of their destination when they are issued. This record can be made on a tracer card inserted into the space left when the casenotes are removed from the library.

51. Casenotes can be logged out electronically on the patient administration system (PAS) if a tracking module is installed. Users call up the tracking module on their terminal, log in when they take casenotes from the library and update the system when they pass them on. This enables anybody looking for a set of casenotes to identify their location by looking it up on a terminal. The introduction of tracking systems linked to PAS has sometimes been ruled out on grounds of cost. This may be a false economy since such systems can pay for themselves by reducing the number of library staff required (Case Study 2).

Exhibit 12
Holding on to casenotes: the vicious circle

Doctors, finding that casenotes are not available, begin to hold on to them for themselves.
Glan Clwyd District General Hospital NHS Trust (Glan Clwyd) introduced computerised tracking in 1990 as part of the implementation of a hospital information system. The cost of the PAS tracking module was not separately identified. If the hospital had bought it separately from its existing PAS supplier, the capital cost would have been about £22,000 and implementing the system would have cost an additional £5,000. In addition, annual support costs would be about £3,000. There were no additional hardware costs at Glan Clywd because there were already sufficient computer terminals for staff throughout the hospital.

Staff in the medical records department now spend significantly less time looking for casenotes and filling in tracer cards. The hospital has saved the equivalent of £20,000 a year in staff costs. This saving is the result of:

- faster tracking of casenotes;
- not having to complete tracer cards; and
- finding casenotes more quickly.

Improvements have allowed the hospital to move some of its existing medical records staff to tasks relating to the contracting process, avoiding the need to employ additional staff.

52. A more sophisticated tracking system makes use of bar codes on casenote folders which can be used to log the movement of individual casenotes throughout the hospital. This system requires the additional provision of bar code readers at strategic points in the hospital.

53. Major difficulties occur if tracking or tracing fails to find the casenotes. This can occur if:

- no tracer card or electronic entry was completed when the casenotes were removed from the library. This happens most frequently when a library is ‘open’ so that anyone can remove casenotes when they are needed – and they may not know how to use the system;
- casenotes are passed on to other people without notifying the library or updating the PAS tracking system.

54. These difficulties are caused by inadequate training and a failure, or inability, to monitor compliance with tracing or tracking procedures. The only solution is education backed by ‘audit’ to identify the people who offend in this way. Those offending repeatedly should be identified and their attention drawn to the consequences of failing to note the location of casenotes. One hospital visited by the Audit Commission makes a point of notifying people requesting casenotes of the name of the last recorded user.

55. Some libraries are ‘open’ so that anyone can remove casenotes. Others are ‘closed’ with only designated medical records staff authorised to file and retrieve casenotes. The main advantage of the closed library is that medical records staff know the procedures and are less likely to issue casenotes without completing a tracer card or making an entry onto the PAS system. The main objection advanced against closed libraries is that they require extra staff to
Prior to the introduction of a closed library, medical records staff at the Royal Cornwall Hospitals Trust were spending a lot of time looking for casenotes. The main reasons were that staff from the rest of the hospital removed casenotes without always recording the location on the tracer card and, on returning them to the library, were sometimes filing them in the wrong place. Although 95 per cent of casenotes were available for outpatient clinics, staff had to put a lot of time and effort into finding them. As a result there was low staff morale, a high level of sickness absence and new medical records clerks rarely stayed in the job for more than six months.

These difficulties were alleviated, but not overcome, by the introduction of a computerised tracking system in 1989. But in November 1992 the medical records library became a 'closed' library - a coded lock was put on the door and nobody except library staff was allowed to enter. Porters and courier van drivers were allowed into the postal area only.

No extra staff were employed to manage the closed library. Indeed, the hospital saved £20,000 a year in staffing costs because the existing number of staff absorbed an increase in workload of 23 per cent between 1991/92 and 1993/94.

Performance was also affected - with 99.8 per cent of casenotes now available for outpatient clinics. Staff morale has improved and sickness and turnover levels have reduced.

In the Audit Commission's survey hospitals with open libraries tended to have a higher percentage of casenotes that could not be traced (Exhibit 13). Improvements in reliability, service to clinical staff and use of time should justify making libraries 'closed'. Hospitals should consider allocating staff to an issue desk in the expectation that the time spent chasing casenotes will be significantly reduced. Arrangements may have to be made for other staff to have access at night when casenotes are required for an emergency. However, the number of such staff would be small and they could be properly trained.

Exhibit 13

Hospitals with open libraries tend to have a higher percentage of notes which have not been traced out.
Organisation of stores

57. Difficulties occur from the start if the library is not well organised. Staff should be adequately trained in record controls, filing and retrieval. There are a number of practical ways for improving filing. For example:

♦ Unfiled casenotes can be stored in the order in which they will be filed to facilitate easy and speedy retrieval.

♦ Every file being processed should be left clearly visible when the office is closed and not hidden away in cupboards or drawers. Availability at any time may be vital.

♦ Clerks should be assigned responsibility for sections of the library. They can be held responsible for keeping their shelves in order, checking regularly for casenotes which may have been misfiled and for tracing those that have been out for some time.

♦ Casenotes with torn or worn covers should be repaired or the cover replaced before filing to ensure that the patient's identifying number is not partially erased and the file misfiled.

♦ Colour coding should be considered with ten distinct colours being used to signify the numbers zero to nine. They can be used to code the patient's number, making it possible to see at a glance when casenotes have been misfiled.

58. Problems occur where racks are overcrowded or the shelving is inadequate, inappropriate or incompatible with other stores. 'Overspill' stores may be set up as a way of countering overcrowding but they tend to generate new problems. It is difficult and labour-intensive to file and retrieve casenotes when there is more than one main library.

59. The Audit Commission found that the number of stores is not related to the size of the hospital (Exhibit 14, overleaf). Having a large number of stores is more of a problem where overspill stores are in inaccessible and unsuitable parts of the hospital. Finding space is not generally a problem in hospitals (Ref. 6), but the space that is available is not always appropriate for the storage of records or is too far away from the centres of patient activity. Fire prevention arrangements are not always adequate and, in some hospitals, casenotes are at risk from water damage. A good location for a records library is close to the outpatients department – usually an area where space is at a premium.
Many hospitals have a number of stores, but the number of stores is not related to the size of the hospital.

Source: Audit Commission.

Retention or destruction of records

60. The problems of overcrowding are best tackled by reducing the amount of material that needs to be held in main libraries. A number of steps can be taken:

- Casenote files should be culled regularly as described in Chapter 1, producing the benefits described for Letterkenny Hospital in Case Study 1. The secondary material can be stored separately.

- Older files that have not been used for a period should be 'weeded' – the whole casenote folder removed from the main library. The relevant period is usually three years, but it can be varied according to local pressures.

- Weeded files can be microfilmed to reduce their bulk. Hospitals have been using microfilm to archive casenotes for many years. Roll film, microfiche or microfilm cassettes indexed to a patient administration system may be used. Microfilming can be undertaken in-house or under contract to a microfilm bureau.

- Alternatively, secondary and non-current files can be stored separately. Commercial off-site storage is an option where suitable space is not available – and can be as cost-effective as microfilming.

- Weeded files can also be stored on optical disc. Pages from the casenotes are scanned and subsequently can be viewed via a terminal or printed out. (An example of this can be found in Case Study 7 in Chapter 4.)

- After a given period archived files can be destroyed, creating more space. The Department of Health has set out guidance on the retention, preservation and destruction of records in circular HC(89)20 (Appendix 2). Personal health records must be held, for legal reasons, for a minimum of eight years. Some, including obstetrics', children's and young peoples' records and those of mentally disordered persons, need to be held for longer periods. But many hospitals store files even longer than these required periods - some because they have no systematic approach for identifying those that they no longer need.
61. Reducing the amount of material stored beyond the minimum periods cuts costs and makes casenote retrieval more manageable. But policies for destroying records must be agreed with relevant health professionals. The achievable savings should also be balanced against other interests such as the needs of clinical research and medical defence. The Department of Health recommends the establishment of medical record committees allowing healthcare professionals to be consulted on this and other issues. A number of hospitals have done this but in practice the committees are not always very active or effective.

62. Hospitals should set out a clear policy for the retention and destruction of records (Case Study 4). Of the hospitals visited, 20 per cent did not have such a policy. Even where a policy existed, it had often not been implemented because of the staff time required or for other financial reasons.

### Case Study 4

**Queen's Medical Centre University Hospital NHS Trust**

**Destruction policy for personal health records**

The policy takes account of the most recent guidance issued by the Department of Health under cover of health circular HC (89) 20 issued in August 1989.

**Policy proposed at University Hospital**

<table>
<thead>
<tr>
<th>Category</th>
<th>Retention Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetric records</td>
<td>Keep for 25 years or eight years after the death of the child (but not mother) if sooner.</td>
</tr>
<tr>
<td>Paediatric records</td>
<td>Keep until patient's 25th birthday or 26th if entry made when young person was 17; or eight years after death of patient if sooner.</td>
</tr>
<tr>
<td>All other records</td>
<td>Destroy when there has been no attendance by the patient within a period of eight years following the date of the last attendance. The following exceptions will apply:</td>
</tr>
<tr>
<td>Head and neck and oncology records</td>
<td>Keep pre- and post-operative typed correspondence, operation/anaesthetic records and typed summaries.</td>
</tr>
<tr>
<td>Gynaecology and general surgery records</td>
<td>Keep pre- and post-operative correspondence, operation, anaesthetic records and histology results.</td>
</tr>
<tr>
<td>Neurosurgery records</td>
<td>Keep all correspondence within and without the hospital, typed or handwritten, all operation notes typed or handwritten, anaesthetic records, radiology and post mortem reports.</td>
</tr>
<tr>
<td>Orthopaedic and trauma surgery records</td>
<td>Keep all typewritten notes, pre- and post-operative correspondence and operation/anaesthetic records.</td>
</tr>
</tbody>
</table>
63. Medical records contain information which is both sensitive and confidential. Individuals have differing perceptions of the sensitivity of information about themselves. For some an address may be sensitive, for others it may be the nature of their illness. It is generally accepted that information exchanged between patient and doctor should be confidential and there is an ethical expectation that doctors will respect confidentiality.

64. If either the patient or the doctor suspects that records may not remain confidential, the quality of the medical record, and hence the quality of care, may suffer. Patients may be unwilling to divulge sensitive information which could compromise care decisions and put them at risk. Clinicians may hold back from recording sensitive data so as to protect the patient and, in some circumstances, themselves.

65. Research in Australia found that public sector databases were far from confidential (Ref. 7). It uncovered a multimillion dollar industry involving large-scale pilfering and systematic trading of personal information. Healthcare information was being traded for health insurance, loans and finance, employment applications, litigation and many other activities. There is no reason to suppose that this in not happening in other countries. A report from the Organisation of Economic Cooperation and Development (OECD) puts hospitals in the top group of organisations at risk from threats to security, on a par with defence and nuclear establishments (Ref. 8).

66. In the UK there is no general law of confidentiality although there are draft OECD guidelines and EC conventions on the privacy of personal information (Refs 9 and 10). The principles set out in the OECD guidelines can be found in Appendix 3.

67. The Audit Commission found numerous instances where medical records were not kept in secure conditions. In a number of cases it would have been easy for unauthorised people to access casenotes from open libraries or from other uncontrolled areas. Notes were often found unattended in outpatients' clinics. Sometimes casenotes from afternoon clinics were left on trolleys until the next morning because the medical records office had closed for the evening. Large numbers of casenotes were usually kept left in medical secretaries' offices and these were sometimes left unlocked overnight. At one hospital a junior doctor left casenotes in a main corridor outside his on-call room for collection.
68. In nearly two thirds of the hospitals visited casenotes were taken out of the hospital by clinical staff for research and other purposes. They had been known to be left under the doormat in doctors' residences and in the boots of cars. In one instance a doctor sold his car with patients' casenotes still in the boot.

69. Unattended computer terminals are another risk, especially if left logged on. The Data Protection Act 1984 provides safeguards for the storage and use of computerised medical records (Appendix 2). It is unlawful to use information from medical records for a purpose for which it was not registered and for which the patient has not given consent. Yet some hospitals have used computerised names and addresses stored on their outpatient computer systems as mailing lists for fundraising. This is a breach of the Act. There is concern that information from medical records might be used for targeted marketing and other commercial purposes. Additional uses for personal health information and modern electronic means of communicating it (for example, by computer networks and by fax) mean that there are increasing opportunities for confidentiality to be breached. The Department of Health will shortly be issuing guidance on confidentiality.

70. Hospitals need to put systems in place which protect the physical security of casenotes. The main records library should be 'closed', with access restricted to medical records staff. If other staff need access, this should be controlled via a reception desk where they should be asked to prove their identity and their need for the record. Outpatient clinics should have a lockable cage to protect any casenotes left while the reception is unattended. The clinic manager should be responsible for ensuring that the clinic is locked after patients have left. Medical secretaries should lock their offices overnight.

71. All who use casenotes – doctors, nurses, medical secretaries, medical records staff and others – need to be aware of the importance of security.
72. Among the people who do have a right to see casenotes are the patients themselves. Under the Access to Health Records Act 1990 all people over the age of 16 have the right to see any of their own casenotes created since November 1991 unless a clinical case is made for access being denied (Appendix 2). Access to records created before this date is at the discretion of the clinician involved. Similarly the Data Protection Act 1984 gives patients the right of access to any information held about them on computer. Applications have to be made in writing to the holder of the record and must be processed within 40 days. Record-holders supplying information are entitled to charge a fee plus the cost of postage and copying. Applications for access are generally dealt with by medical records staff.

73. A survey of community health councils (Ref. 11) has shown that patients face unnecessary restrictions in seeing their medical records. Where there are problems with computer data, the patient can complain to the Data Protection Registrar who will investigate. There is, however, no appeal body for applicants under the Access to Health Records Act 1990. The only recourse is to hospital complaints procedures or to legal action.

74. Hospitals should ensure that arrangements exist for them to discharge their responsibilities to patients in a fair and reasonable manner, preferably as part of an overall policy on confidentiality and security.
**Recommendations**

1. All hospitals should consider introducing closed libraries.

2. They should consider a combination of education backed by audit to reduce the numbers of notes passed on without notification.

3. They should adopt practical ways of improving their filing.

4. Wherever possible, hospitals should have only one main library.

5. Overcrowding should be addressed by a combination of 'culling' and 'weeding', resulting in destruction or alternative storage of non-current files, with a policy setting out the framework.

6. Hospitals should make all staff aware of the need for security to preserve the confidentiality of casenotes. Physical security should be improved wherever possible.

7. Hospitals should ensure that arrangements exist for patients to have access to their casenotes.
If medical records services are to improve, effective management arrangements need to be in place. Improvements may require some initial investment but a high quality service is not necessarily a high cost one.

Medical records managers have a crucial role to play. Traditionally, they have been managers of people; in future they will need to become managers of systems and procedures as well. They need to increase their involvement in policy setting, the training of both staff and record users, and in monitoring.

This will require the involvement of senior management in recognising the importance of the records function and in giving managers the authority they need to monitor users.

These improvements will need to be carefully phased if they are to be manageable.

3 The Management Agenda: Introducing Good Practice
The problems described in Chapters 1 and 2 – poor standards of record-keeping, missing casenotes and untidy and overcrowded libraries – all need to be tackled by management action. This will only be effective if it is underpinned by positive recognition of the value of reliable information and the effects it can have on services and patient care. Purchasers have a role to play here. They can demand certain types of information and carry out their own audits of the standards of record-keeping as part of their contracts with hospitals.

Managers frequently express concern that improving practice will add to costs: extra pairs of hands will be needed to staff ‘closed’ libraries, to cull casenotes and to weed them when they are no longer needed. Certainly, medical records costs do vary. But those hospitals which currently engage in good practice are not necessarily the most expensive. Plotting the cost for each record pulled against total patient activity reveals a significant variation in costs which is not related to the size of the hospital (Exhibit 15).

### Exhibit 15
**Cost per record pulled**

A significant variation in costs occurs which is not related to the size of the hospital.

Total patient activity = day cases + inpatient discharges + deaths + outpatient attendances + ‘did not attend’ + well babies.

Source: Audit Commission.
Comparing one measure of quality – the availability of notes at the start of outpatient clinics – with cost per record pulled shows that the two are not closely linked (Exhibit 16). Indeed, the hospital with the lowest cost also has a low percentage of missing notes. This implies that hospitals can increase the quality of the service without increasing the cost – or conversely that they can decrease the cost without quality suffering. However, Exhibit 16 does show that the hospitals performing well (with no casenotes missing at clinics) are spending more on medical records than those with average performance. In reality, many hospitals may need to invest in medical records in the short term to achieve improvements in the medium term. But it is also clear that higher levels of effectiveness and efficiency can be achieved with the same resources. The key to doing this must start with the way that these services are managed.

Medical records managers

Medical records departments are usually headed by medical records managers. Such managers are to a large extent managers of people. They manage the staff in their departments and supervise their work. Yet staff in every hospital department and profession use casenotes without being accountable to the medical records manager. The medical records manager has no influence over doctors and nurses, and may have no influence over medical secretaries and ward clerks. All of these people write in the record, file documents in it and move the casenotes about the hospital, and most of them have a higher status in the organisation. The medical records manager, in effect, has responsibility without authority.

Management difficulties are increasing because of the trend to devolve medical records staff to clinical directorates and service groups. Exhibit 17 shows the extent to which many functions which in the past were often under the same management as medical records staff are now managed by others.
The role of medical records managers needs to change. As well as being 'people managers', they increasingly need to become systems managers: shaping procedures, managing their implementation and monitoring their effectiveness throughout the hospital.

Some hospitals have achieved significant improvements by appointing managers – often with new titles to stress their wider role – who report directly to a board director. In others, an existing director or senior manager has been given responsibility, and is held accountable, for the performance of the service as a whole.

Strong leadership is essential. Where systems are decentralised, the medical records manager should be responsible for their principles and design. He or she should have the responsibility and authority to monitor and enforce controls throughout the hospital. There is a need to ensure that the new, wider tasks of improving the profile and functioning of medical records services are carried out by a trained medical records manager.
These tasks include:

- devising policies in consultation with clinicians;
- monitoring performance and reporting to the board;
- setting standards for the service;
- writing procedures and training users; and
- ‘policing’ the policies.

83. Some are ill-prepared for this task. Medical records managers are generally third- or fourth-tier officers without management training. Hospitals need to reassess their management arrangements and ensure that there is a director whose remit includes medical records and a suitably trained medical records manager to carry out the basic tasks.

**Setting policies**

84. One of the first tasks for such managers should be helping to set hospital-wide policies on the use and content of casenotes, covering:

- a single hospital casenote for each patient;
- a standard structure for casenotes;
- the clarification of responsibilities of all users of casenotes;
- a retention and destruction policy; and
- the movement of casenotes.

Such policies are best agreed in consultation with a medical records committee. It is particularly important to involve consultants, and members of the medical records committee should consult their colleagues before decisions are made.

**Monitoring performance**

85. Most hospitals review some aspects of medical records performance. Some medical records departments monitor the availability of notes at outpatient clinics. Some consultants and clinical directorates monitor how quickly their specialty sends out discharge letters. Clinical audit monitors the quality of record-keeping as part of its wider remit. However, monitoring initiatives are seldom drawn together by one person and reported to senior management, the medical records committee or the board.

86. One of the new roles for the medical records manager should be to review the performance of the service and report on a regular basis to senior management and the medical records committee. Target levels of service and performance indicators to measure them should be devised and used to produce monitoring reports for the board (Box 1). This would involve drawing together any existing monitoring initiatives as well as deciding on other aspects of performance that could be monitored.
**Box 1**
Performance indicators should be used to produce monitoring reports for the board, for example...

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Timeliness:</strong></td>
<td>♦ time taken for casenotes to reach inpatients admitted as emergencies.</td>
</tr>
<tr>
<td><strong>Availability:</strong></td>
<td>♦ percentage of casenotes available at the start of outpatient clinics;</td>
</tr>
<tr>
<td></td>
<td>♦ percentage of casenotes ‘missing’.</td>
</tr>
<tr>
<td><strong>Quality of record-keeping:</strong></td>
<td>♦ legibility of entries in casenotes;</td>
</tr>
<tr>
<td></td>
<td>♦ filing in casenotes;</td>
</tr>
<tr>
<td></td>
<td>♦ completeness of casenotes.</td>
</tr>
</tbody>
</table>

**Setting standards**

87. Medical records departments need to look carefully at how they are going to organise themselves to meet the hospital’s performance targets. One of the problems that they often experience is an uncontrolled demand for their services without additional resources to provide it. For example, each new consultant appointment leads to more outpatient clinics but hospitals rarely appoint an additional clinic clerk. Instead, the rest of the department has to take on more work.

88. Some hospitals have taken action to control these demands by specifying the relationship between the medical records department and record users (Case Study 5).

89. Service level agreements, whereby directorates are recharged for an agreed level of service, could ultimately become the mechanism by which standards are set, monitored and funded. Clinical directorates would specify service requirements and agree a payment for them. The overall level and quality of service would be controlled via purchaser requirements.

**Case Study 5**
Royal Hull Hospitals NHS Trust

The medical records manager at the Royal Hull Hospitals NHS Trust set up agreements with the three service directorates in October 1993. These set out the services provided, including the number of outpatient clinics, and performance standards for these services. Although the service remains centrally funded and the standards are monitored by the medical records staff rather than those receiving the service, they are a starting point for discussion on how to improve the service. They also allow the medical records manager to control demands placed upon the service. Management information is now routinely collected and discussed at regular meetings with service managers.
90. Medical records managers should take the lead in providing adequate training for all records staff and reinforcing knowledge of policies and procedures for existing staff. They should ensure that new staff joining the hospital are made aware of the tasks that they are required to perform, how these are to be done and the standards that they are expected to achieve.

91. The Audit Commission found that the majority of staff in medical records departments received no more than a day of general induction training and some further training on computerised patient administration systems. Priority should be given to introducing appropriate, standardised programmes for induction, in-service and management training. Some initiatives have started to address these training needs:

- IHRIM is currently piloting a certificate in technical competence in basic medical records practices;
- in Wales, the *Good Practice Guide for Medical Records* was issued during 1993 and is now used throughout the principality.

92. There is a particular need to consider the training needs of staff devolved to clinical directorates, since those appointed after devolution may miss out on training courses previously provided centrally. In one hospital, clinic clerks did not have procedure notes and did not know that they should include sets of sticky labels with patients’ details in each folder. As a result, doctors were spending time writing out these details for each test when they should have been seeing the next patient.

93. Medical records managers should also identify opportunities to educate staff who use casenotes. All those who handle records need to have their responsibilities explained. It is not unusual to find procedure notes for staff working in the medical records department but it is much less common to find guidance for doctors, nurses, ward clerks, medical secretaries and other staff outside the department. A few good examples do exist (Exhibit 18). Such guidance should be supported by training sessions.
The Welsh Medical Records Forum has devised a pocket guide for junior doctors which is a small fold-up card which can be put in the pocket. It explains the importance of records and the responsibilities of doctors towards them.

94. Ideally, medical students should learn about the use and abuse of medical records when they are trained in the taking of clinical histories. They could spend time in the medical records department as part of their training. A good starting point for junior doctors is clinical audit which is often records-based. In 1994 the NHS Training Directorate published *Just for the Record*, a guide to record-keeping by healthcare professionals which provides a useful framework.

95. Effective training requires investment, including cover for staff attending training sessions. However, it should pay for itself through a more efficient use of resources and improvements in the running of the hospital. Training must be seen as an integral part of providing quality medical record services, not an optional extra.
Policing the policies

96. The medical records manager should be responsible for checking that users of records are complying with policies on tracking the location of records and maintaining standards of record-keeping.

97. This is a difficult task which requires a strong character and a position of authority. Consultants often break the rules, for example, by taking files home. Sometimes doctors hold on to casenotes to ensure that they have them for their next clinic. This shows their lack of faith in the medical records system and leads to a lot of time being wasted by clinic clerks searching for the missing files. The medical records manager needs to reverse this sort of attitude by demonstrating how user cooperation will result in a higher quality of service.

98. One way of checking whether users are following the agreed procedures for logging files out of the library is to carry out ‘casenote audits’. The medical records manager should ask staff to go to medical secretaries’ offices or onto wards, to note which files are there and to check whether they have been traced out.

99. The standards of casenotes are often checked by hospital medical audit departments while auditing the care and treatment of patients. But purchasers, too, should be checking that they are paying for the care actually given (as in the United States) and assuring themselves of the quality of record-keeping in general. Hospitals should check the quality of record-keeping as a part of their risk management programme. If casenotes are in poor condition, mistakes are more likely to be made and their defence will be weaker in the event of litigation.

A planned approach

100. Hospitals cannot address all of the issues set out in this report at once. A planned approach is required, with changes scheduled over time. The Manchester Royal Infirmary (now part of the Central Manchester Healthcare NHS Trust) has addressed many of the important issues in recent years and has transformed its service (Case Study 6). In 1990 the medical records department was merely providing a reactive service to clinical directorates. Management staff had no clear responsibilities, there was no training programme and only 60 per cent of casenotes were available at outpatient clinics. The hospital is now achieving much higher levels of service. Annual staff savings of £45,000 have been achieved and the remaining staff have absorbed a seven per cent increase in workload. Other hospitals should draw up their own plans and implementation schedules.
Case Study 6  
Manchester Royal Infirmary

The Manchester Royal Infirmary (MRI) demonstrated the steps necessary to improve a medical records service. First, senior management has to recognise the need for improvement and put in place the structure and mechanisms that enable it to take place. Second, the manager of the medical records service needs to adopt a systematic approach to reviewing and improving the way the system operates.

Stage 1: Strategic approach

1 Gain top-level commitment
   At the MRI the chief executive and the clinical directors were concerned about the quality of the medical records function and were committed to making improvements.

2 Establish a medical records board/committee
   The medical records board was established in January 1989. It was reorganised in May 1991 in order to make it more effective. It now:
   ♦ has a significant clinical input – half of the members are clinicians, the other half medical records staff;
   ♦ reports to the medical director. This means that its recommendations are considered by the body of medical staff who can either agree or disagree with proposed action.

3 Clarify overall responsibility for the medical records service
   The MRI appointed a new patients’ services manager in November 1990 with responsibility for the entire function. She has clear reporting lines to senior management.

Stage 2: Operational approach

The new patients’ services manager began by reviewing the weaknesses in the system and the working practices and workload of the medical records staff. Improvements were prioritised and carried out with the support of the medical records board.

continued...
### How and when the service was improved

<table>
<thead>
<tr>
<th>Priority</th>
<th>Date change happened</th>
<th>Details of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improve the timeliness and quality of coding</td>
<td>March 1991, March 1994</td>
</tr>
<tr>
<td>2</td>
<td>Review staffing and organisation of the library in order to improve casenote availability</td>
<td>Feb. 1991, May 1992, July 1993</td>
</tr>
<tr>
<td>3</td>
<td>Improve the content of casenotes</td>
<td>March 1992</td>
</tr>
<tr>
<td>4</td>
<td>Revise management structure in medical records department</td>
<td>May 1991, Nov. 1994</td>
</tr>
<tr>
<td>5</td>
<td>Educate and train all users of records</td>
<td>Feb. 1992, Nov. 1992, May 1993, March 1994, July 1994</td>
</tr>
</tbody>
</table>
Recommendations

1. Hospitals should look at how their costs and performance compare with others as the basis for planning a strategy for medical records.

2. They should consider how to improve management arrangements for medical records to provide strong leadership.

3. The role of the medical records manager should gradually change from manager of people to manager of systems and procedures as well.

4. Medical records managers should help to set hospital-wide policies on casenotes in conjunction with a medical records committee.

5. They should take a lead in providing adequate training for all records staff and for users of records.

6. They should set standards, possibly through service level agreements, with clinical directorates.

7. They should check on users of records to ensure that they are complying with policies and maintaining standards of record-keeping.

8. Performance indicators should be used to produce monitoring reports for the board on a regular basis.

9. Hospitals should draw up their own plans and implementation schedules.
Many of the problems outlined in this report could, in theory at least, be addressed by alternative approaches such as patient-held records and new technology. But many of the basic improvements described in previous chapters need to be in place before radical solutions should be contemplated.

Hospitals should carefully consider the costs and benefits of alternatives to hospital-held paper records and take a planned and incremental approach to any that they decide to implement.

4 More Radical Solutions: Alternative Approaches and New Technology
'Unless the existing system of medical records is sound and unless alternatives are considered carefully before implementation, they can cause as many problems as they solve'

101. Many of the problems described in Chapters 1 and 2 result from medical records being held on paper. Paper records used by a large number of people inevitably become disorganised and parts of the record can go missing.Contributors may not write legibly and it is difficult to get agreement on the structure and order of the file. The casenotes can only be in one place at a time and may not be accessible when needed. They require large storage areas and the stores themselves can become disorganised, making the process of finding and filing more time-consuming.

102. There are a number of alternatives to hospital casenotes. Some, like paper patient-held records, have been around for some time. Others, such as 'smart cards' and hospital-based electronic solutions, are still being researched:

- **Patient-held records** can either be in paper or electronic format (for example, as a 'smart card'). If patients hold their own records, they are more likely to be available when needed and the patient has more control over confidentiality.

- **Document image processing (DIP)** can relieve storage problems by archiving paper records on to optical discs which can be accessed by a terminal or by printing out. The discs can also be linked to the hospital information system as one step towards the development of an electronic patient record.

- **Electronic patient records** have the potential to solve problems of poor record-keeping and storage and retrieval problems. Ultimately they will replace paper records completely by holding all information about a patient electronically. They provide instant and simultaneous access to authorised users wherever there is a computer terminal.

103. Hospitals should approach these alternatives with caution. Unless the existing system of medical records is sound and unless alternatives are considered carefully before implementation, they can cause as many problems as they solve. Boxes 2 and 3 (overleaf) show how they address the problems described in Chapters 1 (the quality of record-keeping) and 2 (storage and retrieval). Each of the alternatives is then discussed in more detail.
### Box 2

**How alternative approaches can improve the quality of record-keeping**

<table>
<thead>
<tr>
<th>Current problem</th>
<th>Patient-held record (paper)</th>
<th>Patient-held record (smart card)</th>
<th>Electronic patient record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult for doctors to use casenotes because they are unstructured and it is hard to find what they need. Specialties create own single specialty casenotes.</td>
<td></td>
<td>Basic details of patient easy to use and presented in a structured format.</td>
<td>Data can be retrieved in a variety of ways, e.g. all current medication, test results for a specific date range. The reason for single specialty notes ceases to exist.</td>
</tr>
<tr>
<td>Entries are illegible.</td>
<td>Patients may put pressure on doctors to write legibly.</td>
<td>Basic details about patient are legible.</td>
<td>Entries are normally typed and therefore legible unless handwritten documents are scanned into the record using DIP technology.</td>
</tr>
<tr>
<td>Casenotes are incomplete, for example, test results are missing or diagnoses not clear.</td>
<td>Patients are less likely to mislay parts of their own record.</td>
<td>Basic details are always available.</td>
<td>Structured input technique can ensure that vital elements are not omitted (e.g. diagnoses, procedures).</td>
</tr>
<tr>
<td>Entries in the casenotes are not dated or signed.</td>
<td></td>
<td>Date that details are updated is automatically recorded.</td>
<td>Author and date are automatically assigned to entries.</td>
</tr>
<tr>
<td>Casenotes become fat and unwieldy.</td>
<td></td>
<td>Structured format ensures that entries are kept concise.</td>
<td>No longer a problem. The need for culling is largely eliminated as storage space is no longer an issue.</td>
</tr>
</tbody>
</table>
Box 3
How alternative approaches can improve the secure and confidential storage and retrieval of casenotes

<table>
<thead>
<tr>
<th>Current problem</th>
<th>Patient-held record (paper)</th>
<th>Patient-held record (smart card)</th>
<th>Document image processing</th>
<th>Electronic patient record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casenotes can only be in one place at a time.</td>
<td>Casenotes are in the most useful place - with the patient.</td>
<td>Casenotes are in the most useful place - with the patient.</td>
<td>Multiple copies can be printed out of the same set of casenotes. Can allow multiple access via terminals.</td>
<td>Electronic records can be accessed by more than one user at a time wherever there is a terminal.</td>
</tr>
<tr>
<td>Casenotes are time-consuming to find and sometimes not found at all.</td>
<td>Patients bring their own casenotes and save staff time in looking for them.</td>
<td>Patients bring their smart card which contains basic details.</td>
<td>Records are always available and can be printed out on request or viewed on terminals.</td>
<td>Records are instantly available and no staff are required to find them.</td>
</tr>
<tr>
<td>Large amounts of storage area are required. Overcrowded and disorganised stores lead to misfiling.</td>
<td>Casenote storage is still necessary, if only as an archive, since the hospital needs its own copy of the record.</td>
<td>Casenote storage is still necessary, if only as an archive, since the hospital needs its own copy of the record.</td>
<td>Records are stored electronically and storage space is released. Misfiling is no longer an issue.</td>
<td>Records are stored electronically and storage space is released. Misfiling is no longer an issue.</td>
</tr>
<tr>
<td>Records are not always kept securely and confidentially.</td>
<td>Patients have control over the confidentiality and security of their records, although a set of hospital casenotes should still exist.</td>
<td>Smart cards are more confidential because they can only be accessed via a reader which requires a password. Hospital casenotes should still exist.</td>
<td>Records can only be accessed by those authorised to use the system. Once printed out the casenotes can be subject to problems of security and confidentiality.</td>
<td>Users of the record can be assigned rights to view only certain types of entry. Passwords control access and audit trails identify anyone who has accessed a record.</td>
</tr>
</tbody>
</table>
Paper patient-held records

104. The place where casenotes are most needed for the purposes of patient care is wherever the patient is. Therefore asking patients to look after their own casenotes can offer a partial solution to the problems of keeping records complete, ensuring that they are available when needed and keeping them secure and confidential.

105. Patient-held records also allow better communication between primary and hospital care – particularly appropriate for patients with long-term conditions such as diabetes, HIV infection and sickle cell disease. Patients with a sickle cell crisis, for example, can produce their records in the A&E department, enabling the staff to provide quicker pain relief, but the advantages are significant for all with long-term conditions (Box 4). Patient-held record systems for children and antenatal patients are also well established.

Box 4

The patient’s initiative

Over the past five years I have been an outpatient at three hospitals, have seen five consultants and had countless appointments, all of which relate to the same illness. Each time I see a different doctor I have to relate the history of the illness, investigations and treatment. The first time that I saw a different consultant I was unprepared. I found it hard to remember some of the details as I had assumed wrongly that all the facts would be in the referral letter. After this visit I sat down and summarised my medical history, initially as an aide-mémoire for myself and partly to help any other doctors I saw. I update it as necessary.

This summary contains my presenting symptoms, course of the illness, investigations carried out, treatment and, for me the most important part, the real problems of the result of the illness. This is on my computer. I now produce a handout for each consultant. It helps me when I have to relate the pattern of what is now a complicated illness. After five years I have got it to a fine art. I hope that the hospital staff also find it of benefit as they do not have to thumb through a wad of notes, letters and investigations. An added benefit is that it has given me a greater feeling of participating in my medical treatment.

Many people are surprised I do this, but one doctor said he wished that more patients would follow my example. Perhaps more patients should be encouraged to contribute to their own notes, particularly when they have a long or complicated history.

I long for the day when I can wipe off the information. Meanwhile before every appointment to a new hospital department I run off the latest instalment of my medical notes. (Ref. 12)
106. A number of studies have demonstrated that patients are less likely to lose or mislay their records than hospitals:

♦ Staff at St Thomas’ Hospital found that while they lost or mislaid over a quarter of the records of expectant mothers attending an antenatal clinic, not one of the mothers given their own records lost them (Ref. 13).

♦ A project in Walsall for travellers found that they kept their health records securely and completed immunisation programmes (Ref. 14).

♦ One study found that homeless mentally ill people could keep their records successfully (Ref. 15) – and certainly more successfully than hospitals.

107. Where patients hold their own records, there are other benefits. They tend to take more responsibility for their own health and are better informed than those who do not. Those with conditions where their records may be relevant in later years could also benefit. There are, for example, growing numbers of children who develop cancer but who survive to adulthood. Those who lose touch with the hospital where they were treated as children are likely to have their records destroyed when they reach 25 years of age if the records are kept at the hospital. If they kept them for themselves, they would have them available should any long-term side-effects of treatment become apparent in adult life (Ref. 16).

108. There are, however, disadvantages to patient-held records. The hospital should normally keep a copy of the records of care for administration, contract management and medico-legal requirements. This means that two sets of documentation have to be updated, creating extra work for hospital staff.

109. Hospitals should examine the advantages and disadvantages of patient-held records and consider using them for the groups of patients for whom they are particularly suitable:

♦ patients who visit the hospital frequently for a discrete period of time (such as obstetric patients);

♦ those who are particularly concerned about confidentiality and security (such as HIV patients);

♦ patients with long-term conditions (such as diabetes and sickle cell disease); and

♦ patients whose condition requires care to be shared between hospital clinics and/or between hospital and community services.

Box 5 (overleaf) summarises the advantages and disadvantages of patient-held records.
### Patient-held records

<table>
<thead>
<tr>
<th><strong>Disadvantages</strong></th>
<th><strong>Advantages</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>If patients lose their records, they are likely to be lost completely - if they are lost by the hospital, they may turn up eventually.</td>
<td>Patients are less likely to lose records than hospitals are.</td>
</tr>
<tr>
<td>Doctors may need to spend more time explaining the records.</td>
<td>Patients benefit from better explanations.</td>
</tr>
<tr>
<td>Two copies of records may be needed, increasing the time and costs of producing and updating both copies.</td>
<td>Two copies are not always needed, although summaries and essential information should be held by the hospital.</td>
</tr>
<tr>
<td>Doctors will feel inhibited and may keep another set of private notes.</td>
<td>A study found that clinicians were more likely to 'censor' diagnoses such as obesity than cancer or terminal illness.</td>
</tr>
<tr>
<td>Detailed information makes people more anxious.</td>
<td>Patients who are better informed tend to take more responsibility for their health.</td>
</tr>
<tr>
<td>Detailed information could destroy the rapport and trust between doctor and patient.</td>
<td>Studies show that patient-held records increase the rapport between doctor and patient.</td>
</tr>
<tr>
<td>Records kept at home may be seen by other people without the permission of the patient.</td>
<td>Patients control the confidentiality of their own records.</td>
</tr>
<tr>
<td></td>
<td>Patients can correct any inaccuracies in their records. Studies show between ten and twelve per cent of patient notes contain errors.</td>
</tr>
<tr>
<td></td>
<td>GPs can see a record of hospital treatment at the surgery or on house visits.</td>
</tr>
<tr>
<td></td>
<td>Records can cover both health and social care and improve coordination between services.</td>
</tr>
<tr>
<td></td>
<td>Delays are reduced when patients move or present at an accident and emergency department in another area.</td>
</tr>
<tr>
<td></td>
<td>Patients can keep their records longer than the hospital may choose to.</td>
</tr>
<tr>
<td></td>
<td>There are potential savings in storage and retrieval.</td>
</tr>
</tbody>
</table>

*Source: C. Hogg, adapted from Beyond the Patient’s Charter: Working with Users, Health Rights, 1994.*
Electronic patient-held records

110. Part of the problem with patient-held records is that they are bulky and not easy to carry around. Some people are experimenting with ‘smart’ cards. These are the size of plastic credit cards and have information recorded on an integrated circuit chip. This makes them ‘smart’ and able to provide different levels of access to those reading the card, depending on their authorisation level.

111. Smart cards can include the person’s name, address, telephone number, date of birth, next of kin, GP, health authority, blood group and details of any allergies or drug reactions, and a summary of the medical record. They can be read by any computer equipped with suitable hardware (a card reader) and software. Optical cards differ from smart cards in that they have a far greater capacity for storing data. However, they are unable to provide controlled access and therefore cannot guarantee confidentiality.

112. Reported trials of smart cards have been undertaken in several countries (UK, France, Italy, Belgium, Canada, Austria, Spain, the United States and Australia). Interest is growing and several new trials are in progress. In general, these studies have demonstrated the feasibility of the concept and high levels of acceptance by both providers and patients.

113. The NHS Care Card trial in Exmouth started in 1989 with some 9,000 cards, supplemented with a further release of cards later in the trial. Reader/writer systems were installed in selected locations such as GP surgeries, pharmacies, dental surgeries and A&E departments. Different service providers were assigned different levels of data access and data recording rights. The review of the trial (Ref. 17) noted a significant reduction in the use of tests and investigation services, reduced levels of repeat prescriptions and increased levels of patient satisfaction. This study was closed in late 1994, but a new trial will start in 1995 of an enhanced international smart card system with over 500,000 cards to be issued in the UK and Portugal (the PANACEA project).

114. The benefits of smart cards are similar to those of paper patient-held records. Additional benefits are that access can be controlled (leading to greater confidentiality) and that there are no problems with legibility, providing a card reader is available. More research and evaluation into the costs and benefits are still needed before hospitals and GPs can make decisions as to whether to implement them.

Document image processing

115. Document image processing (DIP) can solve storage and archiving problems. A scanner is used to ‘capture’ existing documents which are indexed and stored on optical discs. These discs are stored in ‘Juke Boxes’ and read by lasers. This allows simultaneous access by more than one user to records that are available 24 hours a day.
The Central Sheffield University Hospitals NHS Trust is addressing its medical records storage problems by using optical disc storage/document image processing (DIP). When the trust was formed from the merger of three hospitals in 1990, it had ten main libraries. Since then an ever-increasing volume of medical records has been created which has led to a less than satisfactory service.

The trust did not want to destroy any medical records. It therefore carried out an independent appraisal which considered the options of additional physical storage (on-site or off-site), microfilming or document image processing (DIP). Although DIP was not the cheapest option, the cost differences over a five-year period were marginal, particularly because of the high volume of records involved. It was also an investment towards the development of an electronic patient record.

The current project involves scanning all non-current casenotes using DIP and storing them on optical disc. These can be viewed via a terminal in the medical records library or printed as required. During a three-month pilot period over one million pieces of paper were scanned and 500 feet of shelving was cleared. It is estimated that over the next five years 37.5 million pieces of paper will be scanned. Records that have been scanned are instantly accessible as well as being held more securely. The casenotes remaining in the library can be found more easily and the working environment for library staff has improved.

DIP can provide a solution for the storage and retrieval of files (Case Study 7). However, it does not have the capacity to search, sort, summarise or report, all of which are increasingly necessary for the effective management of information in hospitals. It can be used as a stepping-stone towards developing electronic patient records if combined with other systems in the hospital.

Electronic patient records

Electronic patient records (EPRs) will ultimately replace the need for paper-based records. They can contain everything that is currently held in a set of casenotes and may comprise text, sound and image (e.g. x-rays). The information contained in an EPR can be sorted, summarised or reported and put to a number of different uses. These include providing information for the contracting process, for managing hospital activity and for statistics for the Department of Health.

'Partial' EPR systems that hold some information about patients electronically or in only one hospital department have existed for some time. These range from departmental systems to hospital information support systems which contain many patient-based details (for example, results of tests). One example of a departmental system is in the intensive treatment unit (ITU) at the John Radcliffe Hospital, Oxford. There they hold 70 to 80 per cent of documentation concerning the patient electronically. This includes all test and monitoring results, drug prescriptions, daily progress notes and discharge summaries. At the end of the patient's stay, a summary of the episode is printed out and put in the patient's casenotes.
119. There are no examples in the UK of a ‘full’ EPR system. One European example is the University Hospital in Geneva which holds all patient records electronically. Clinical notes are typed in by secretaries using Windows software – although the notes must be authorised by the doctor before the system will accept them. Laboratory and radiology tests are ordered and reported through the system and it also produces operating reports and discharge letters. In the hospital 1500 terminals provide access to the integrated information on individual patients. However, the hospital has experienced difficulties in finding enough money to continue running the system.

120. In January 1994 the NHS Executive moved forward on the development of EPR systems in the UK by setting up a three-year research and development project – the ‘EPR Programme’. It intends the outcome of the research to feed into the development of clinical systems which will be available in seven to ten years’ time. Two demonstrator sites have been selected – Wirral Hospitals and Burton Hospitals NHS Trusts. Each has been allocated £900,000 so that they can be prototypes for different models of EPR systems. Burton Hospitals will concentrate on the problems of structured text-based records, archiving and document imaging. Wirral Hospitals will investigate various models of data input and access and methods of knowledge and decision support. The programme will be evaluated during the next two years and on completion in December 1996.

121. The main stumbling blocks that hospitals face in considering EPR systems are threefold. First, there is the cost. Investment in healthcare computing is perceived as risky and uncertain (partly as a result of failures in the past) and has to compete with more visible investments. Second, the users of the system, particularly clinicians, do not always favour computerisation – either due to anxiety or because they do not think it will serve their needs. For the introduction of EPR technology to be successful doctors, in particular, need to be convinced and committed to making it work. A third obstacle is the uncertainty surrounding the legal status of medical records held electronically. This has yet to be tested in court.

122. Hospitals should take a planned and incremental approach to EPR systems based on available funds, local needs and the attitudes of clinicians. At each stage, hospitals should review progress and adjust their future plans if necessary in the light of new developments or any problems encountered during the previous stage. To avoid duplication of effort by individual hospitals, the NHS Executive should take the role of disseminating good practice and advice on projects that have been successful in other hospitals.

123. An example of how an incremental approach to EPR systems can be adopted is the Erasme University Hospital in Brussels (Case Study 8, overleaf).
Over the past five years the Erasme University Hospital has been moving towards an EPR system. It has done this by examining its existing systems, exploring the possibilities of matching them with others (interfacing) and adding to the system where necessary. As a first step it introduced a DIP system for storing active records on optical disc. In 1990 it linked the DIP system to its hospital information system.

There is now a paperless environment in the outpatients department where all information about a patient can be viewed at a computer terminal. To prepare for clinics, the outpatient booking system requests the DIP system to send the appropriate files to outpatient consulting rooms so that the doctors can view them sequentially on terminals, updating as necessary. Casenotes are still printed out for inpatients, but on pink paper so that they can be recognised as temporary and discarded after discharge. New notes are written on white paper and subsequently scanned into the system.

The hospital recouped its costs within three and a half years by reducing the number of medical records staff from 44 to 10. It now saves £300,000 a year from having fewer staff. A hospital in the UK considering a similar approach at current prices would recover the cost of between £500,000 and £750,000 of purchasing the computer hardware and software in two to three years. This is based on a hospital with 40 library and clinic clerks. After the initial investment had been paid back, such a hospital would make annual savings on staff costs in the region of £250,000.

The hospital has solved many of the traditional difficulties of manual medical records systems and is developing ideas for future improvements. It has been successful because doctors are committed to the system. They are changing the way that they work as they look for new ways in which the system can assist them and improve patient care.
Conclusions

124. Technology offers hospitals some exciting possibilities for the future. EPR systems will enable doctors to use the information contained in medical records to the full – for example, for research and for better clinical practice – because it can be easily sorted and analysed to much greater effect. But before technology can be used effectively, hospitals need to improve their manual systems. It is important for hospitals to:

♦ develop a systems-based approach to the management of medical records, with one person in charge of the whole system;

♦ clarify the roles and responsibilities of all users of the system;

♦ set and monitor policies on the structure and content of records and how to ensure confidentiality; and

♦ recognise the value of properly managed information.

125. There is also a need for more research into the costs and benefits of alternatives to the hospital-held paper record. Hospitals should plan any changes carefully, take an incremental approach and monitor the effects of the changes.
Recommendations

1. Hospitals should put in place the basic improvements set out in this report before attempting more radical solutions.

2. Patient-held records have both advantages and disadvantages and hospitals should consider using them for the groups of patients whom they benefit most.

3. Further research should be carried out on new technologies.

4. The NHS Executive should provide an advisory service to hospitals on the results of research and the experiences of other hospitals with new technology.
Appendix 1 – The advisory group

Main advisory group

Norman Campion  
Head of Business Management, Ysbyty Maelor Hospital, Wrexham

Dr Michael Clark  
Consultant Physician, St Bartholomew’s Hospital, London

Dr Mary Cotter  
Consultant in Public Health Medicine, Welsh Health Common Services Authority

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Consultant Geriatrician, Queen Alexandra Hospital, Portsmouth
Appendix 2 – Legal issues

Ownership of records

Any records that are in writing comprise two elements:

♦ the physical paper on which the words are written; and
♦ the information contained in them.

In the NHS medical records belong physically to the NHS trust or hospital (or the FHSA for GP records) and ultimately to the Secretary of State. The records of private patients belong to the health professional with whom they have a contract.

This ownership is unusual in that the ‘owner’ has a custodial responsibility but cannot sell or dispose of records. The ‘owner’ is also obliged to provide patients with access to them (see below).

The duty of confidence

Personal health information is protected by:

♦ the moral and ethical responsibilities of health professionals;
♦ the Data Protection Act 1984 in the case of information held on a computer; and
♦ common law, which applies to all types of information given or received in confidence. However, it is unable to act unless there is evidence of defamation or bribery involved in any disclosure. Most breaches of confidentiality are therefore allowed to pass without any redress for the victim.

All health professionals have a duty by their professional standards or contracts to respect confidence. There are some circumstances in which the duty of confidence may be overridden and disclosure made despite the absence of consent (either express or implied) from the patient. These include disclosures which are:

♦ required by court order;
♦ required by statute (e.g. notifiable diseases); and
♦ in the public interest (e.g. research approved by an ethics committee, suspected child abuse).
It is a general principle of the law of confidence that information given or obtained for one purpose should not be used for a different purpose without the express or implied authorisation of the provider of the information. This confidence must be respected in the use of all records used for clinical audit, research or administrative purposes. Abstracts of records should be anonymised or explicit consent obtained from the patient concerned. In general, health information may be used and disclosed within the NHS for NHS purposes on the basis of the implied consent of the patient. It must however be handled on a strict ‘need-to-know’ basis.

**Patient access**

The Data Protection Act 1984 gave patients the legal right to see computerised patient records. The Registrar can investigate complaints about violation of the data protection principles (such as loss of records or breach of confidentiality) and the individual may have a right to compensation against the data user.

In 1987 this right was extended to any health record held in computerised form unless the information was likely to cause serious harm to the physical or mental health of the patient.

In 1988 the Access to Medical Reports Act gave the right of access to any medical report that had been supplied by a medical practitioner for employment or insurance purposes.

The Access to Health Records Act 1990 came into effect in November 1991 and gave patients the statutory right of access to their health records. The Access to Health Records (Control of Access) Regulations 1993 amends the 1990 Act so that access shall not be given to any part of a health record that would disclose information identifying an individual who was or might have been born in consequence of treatment within the meaning of the Human Fertilisation and Embryology Act 1990.

The Access to Health Records Act 1990 gives patients access to non-computerised health records made after 1 November 1991 and to information recorded earlier when it is necessary in order for the patient to understand what was written later. Both NHS and private health records are covered.
Retention of records

Some documents must be retained for a minimum period for legal reasons. The casenote folder, for example, is a permanent or primary document which, for acute specialties, should be retained for a minimum period of eight years after the last entry in the casenotes (HC (89) 20, as amended by HSG(94)11).

<table>
<thead>
<tr>
<th>Primary documents</th>
<th>Personal health records: eight years after last attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>to be retained for a legal minimum period</td>
<td>Casenote folder; identification/admission sheets; discharge letters/summaries; referral letters; history sheets; operation sheets; nursing records; anaesthetic sheet.</td>
</tr>
<tr>
<td><strong>Mental health records</strong>: 20 years after no further treatment considered necessary or eight years after death</td>
<td></td>
</tr>
<tr>
<td><strong>Records relating to children and young people</strong> including community child health records: until patient's 25th birthday or 26th if entry made when young person was 17 or eight years after death if sooner</td>
<td></td>
</tr>
<tr>
<td><strong>Obstetric records</strong>: 25 years</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary documents</th>
<th>Mount sheet; pathology reports; x-ray reports; drug sheets.</th>
</tr>
</thead>
<tbody>
<tr>
<td>to be retained for locally agreed periods</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transitory documents</th>
<th>Temperature, pulse, respiration, blood pressure and fluid balance charts</th>
</tr>
</thead>
<tbody>
<tr>
<td>to be retained for locally agreed periods</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3 – Principles of personal information confidentiality (based on OECD guidelines) (Ref.9)

1 Purpose of collection of personal information
Personal information may not be collected by an agency unless the information is collected for a lawful purpose directly related to and necessary for a function or activity of that agency.

2 Manner of collection of personal information
Information should normally only be collected directly from and with the knowledge and informed consent of the individual concerned.

3 Solicitation of personal information from the individual concerned
An agency must ensure that the individual concerned is aware of the purpose for which the information is being collected, the intended recipients of the information, whether the collection is required by law, and their rights of access to and correction of the personal information provided.

4 Solicitation of personal information generally
Information collected by an agency must be relevant to their purpose, up-to-date and complete, and should not intrude unreasonably into their personal affairs.

5 Storage and security of personal information
Information held by an agency must be protected against loss, damage, unauthorised access, modification or disclosure and against any other form of misuse.

6 Information relating to personal information kept by an agency
Agencies should maintain documentation as to the information that they hold, the persons or institutions who have access to that data and the conditions under which they can exercise that access, and the steps that should be taken by individuals wishing to obtain access to their own information.

7 Access to personal information
Individuals should have a right of access to any personal information about them that is held in a form that can readily be retrieved.

8 Access to reasons for decisions
Where a decision is taken based on personal information held, the individual is entitled to an explanation of the reasons for that decision.
9 Correction of personal information
Where information is held by an agency, the individual is entitled to request corrections to be made; where correction of the information cannot be made, or is refused, a note must be added which records the changes requested and which is always seen by the reader in conjunction with the disputed information.

10 Agency to check accuracy of personal information before use
Information must be kept up-to-date, accurate and complete, and must not be held or presented in such a manner or form as to be misleading.

11 Agency not to keep personal information for longer than necessary
Personalised information shall be held only for as long as it is needed for the purpose for which it was collected, or for any other lawful purpose for which that information may be used.

12 Personal information to be used only for relevant purposes
Information may only be used for a purpose to which the information is relevant.

13 Limits on use of personal information
Information may only be used for the purpose for which it was obtained, other than:
♦ with the permission of the subject; or
♦ where it is necessary to prevent or lessen a serious or imminent threat to the life of the individual or another person; or
♦ where it is authorised by law; or
♦ where it is used in a way whereby the individual cannot be identified.

14 Limits on disclosure of personal information
Information should not be disclosed other than:
♦ to the subject of the information; or
♦ where that disclosure is required or permitted by law; or
♦ where the purpose of disclosure is that for which the information was collected; or
♦ the disclosure is authorised by the subject of the information; or
♦ the disclosure is believed necessary to prevent or lessen a serious threat to the life or health of the subject or another individual; or
♦ the disclosure is in a form such that it is highly unlikely that the identity of the individual could be inferred.
References

3. Department of Health, *Health Building Note (HBN) 47*, HMSO.
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