NATIONAL AUDIT OFFICE

REPORT BY THE
COMPTROLLER AND
AUDITOR GENERAL

Clinical Audit in England

HC 27 Session 1995–96
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John Bourn
Comptroller and Auditor General

National Audit Office
17 November 1995

The Comptroller and Auditor General is the head of the National Audit Office employing some 750 staff. He, and the NAO, are totally independent of Government. He certifies the accounts of all Government departments and a wide range of other public sector bodies; and he has statutory authority to report to Parliament on the economy, efficiency and effectiveness with which departments and other bodies have used their resources.

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Preface

Clinical audit, which was formally introduced in 1989-90, has evolved against a backdrop of major change in the way in which the National Health Service is managed and funded. Reorganisation of the National Health Service has increased devolution of responsibility for patient services and decision making to local purchasers and providers of health care.

Responsibility and arrangements for managing and monitoring the overall performance of the National Health Service have evolved initially under the Department of Health, followed by the NHS Management Executive in 1990 and, since 1 April 1994, the NHS Executive.

These bodies had different approaches to the management and monitoring of the National Health Service reflecting the changing structures within the National Health Service and the changing role of central management – from the more directive and interventionist role of the NHS Management Executive, to a system which now leaves day to day interpretation and management of policy to health authorities and NHS trusts. The NHS Executive see their role, within a decentralised system, as strategic rather than operational.

Management arrangements have been changed mainly as a result of the Government's decision to abolish regional health authorities and to absorb their more strategic roles into the functions of the newly created regional offices of the NHS Executive.

This report examines the progress of the audit of clinical care between 1989-90 and 1994-95, focusing largely on the period of centrally directed and funded activity up to 31 March 1994. It also sets out how the clinical audit initiative has been adapted latterly to reflect the structural and operational changes in the National Health Service.

Summary and conclusions

Background

Paragraphs 1.1 to 1.3

1 Clinical audit is a process in which doctors, nurses and other health care professionals systematically review, and where necessary make changes to, the care and treatment they provide to patients. Its primary objective is to improve the quality and outcome of patient care; the NHS Executive intend it to be an important component of continuing professional development and education. Some health care professionals in the National Health Service have audited their practice for many years, but it is only in recent years that the audit of clinical care has been encouraged as a routine part of professional practice.

Paragraphs 1.5 to 1.7

2 The White Paper "Working for Patients" introduced the audit of clinical care initiative in 1989. The purpose of the initiative is to improve the quality of patient care by creating the conditions which would lead to clinical audit becoming part of routine practice for all health care professionals. Between 1989-90 and 1993-94, the NHS Management Executive provided some £218 million, mainly through allocations to the regional health authorities, for the introduction and development of clinical audit in the National Health Service. A further £61 million was provided in 1994-95, mainly included as an indicative amount within regions' general allocations. Although funds intended for clinical audit purposes are included in regions' general allocations, from April 1995 the NHS Executive no longer separately identify those funds.

Paragraph 1.9

3 This report examines the progress made in the National Health Service with this initiative, in particular:

- the extent of clinical audit;
- the benefits and costs of clinical audit; and
- the further development of clinical audit.

Paragraph 1.10

4 In preparing this report, the National Audit Office also had regard to the recommendations set out in the Report of the Committee of Public Accounts on Auditing Clinical Care in Scotland, (51st Report, Session 1993-94) and the Government's response to that report (Cm 2754).

The extent of clinical audit

Paragraphs 2.3 to 2.6
Tables 1 and 2

5 The NHS Executive estimate that in 1993-94, the latest year for which information is available, over 20,000 clinical audit projects were undertaken in the hospital and community health services in England. The three regional health authorities visited by the National Audit Office reported that almost 7,000 clinical audit projects were undertaken during the same year in the hospital and community services within their boundaries. The figure for the eight NHS trusts visited by the National Audit Office as part of this study was over 1,400.

Paragraphs 2.7 to 2.11

6 The NHS Executive derived their national estimate from regional health authorities' annual clinical audit reports. The data contained in those reports give a general picture of the development of the initiative; and the Executive identified more clearly the data they required in 1993-94. Nonetheless, some differences in the interpretation of clinical audit activity remain.

Paragraphs 2.12 and 2.13

7 The NHS Executive do not systematically collect information on the number of primary health care clinical audit projects undertaken. They have, therefore, selectively commissioned studies of the progress of clinical audit in the family health services. The studies have provided the Executive with information about the role medical audit advisory groups play in promoting clinical audit locally, the funding of those groups, and the types of changes in clinical practice resulting from clinical audit. The studies do not, however, enable the Executive to quantify precisely how much clinical audit activity was taking place in the primary health care sector.

Paragraphs 2.1 and 2.15

8 The NHS Executive intend that clinical audit should become part of routine practice for all health care professionals. Because of the Executive's general move away from collecting detailed statistics on health service activity in favour of a devolved management approach, their monitoring of participation in the clinical audit process has been selective. They monitored only hospital and community health doctors' attendance at clinical audit meetings.

Paragraphs 2.16 and 2.17

9 Research commissioned by the NHS Management Executive indicates that, during 1993, 83 per cent of hospital and community health consultants attended most or all clinical audit meetings in their specialties. At the NHS trusts visited all, or the majority of, hospital specialties were participating in clinical audit activities, though some specialties were more active than others.

Paragraphs 2.19 and 2.20

10 Because of their devolved management approach, the NHS Executive have not developed systems to monitor participation by individual general practitioners, nurses and other health care professionals. They have, however, commissioned a national survey which indicates that 86 per cent of general practices were participating in clinical audit in 1993-94. The family health services authorities visited estimated that an average of 82 per cent of general practices were participating in clinical audit activities.

Benefits and costs

Paragraphs 3.5 to 3.9
Tables 3 and 4

11 The regions visited by the National Audit Office reported that about one third of clinical audit projects undertaken in the hospital and community health services during 1993-94 had led to changes in clinical care. There were wide differences in the type of changes reported as resulting from clinical audit. Some of the changes had led – and others may lead – to improved quality of patient care and outcomes. About one in four clinical audit projects involved the use or development of clinical guidelines. Clinical audit need not always lead to change; it may provide assurance that the care provided conforms to satisfactorily high standards of practice and care. And the process of clinical audit itself has the potential to contribute to continuing professional development and education.

Paragraphs 3.10 to 3.15

12 In 1993 and 1994, the NHS Management Executive published four reports which reviewed the progress of the clinical audit initiative. The reports concluded that clinical audit had led to significant changes in clinical practice and organisation, but they did not set out to assess the impact of clinical audit on the quality of patient care or outcomes. The Executive also commissioned studies of the organisation and development of clinical audit. Two reports on clinical audit by hospital doctors were published in 1994; these reports concluded that clinical audit had been established as part of clinical practice and health care provision in the hospital and community health services, and that it had led to, or facilitated, change in a wide range of areas. A further report on clinical audit in hospitals, published in 1995, concluded however that monitoring was difficult, and that although attendance at clinical audit meetings was generally high, few changes directly affected the quality of

health care delivered to patients. Most changes affected the health care delivery process which could be expected to affect patients indirectly.

Paragraphs 3.17 to 3.24

13 The NHS Management Executive collected information on the amount of funds regional health authorities allocated to district health authorities for implementing clinical audit in the hospital and community health services. At the NHS trusts visited about two-thirds of expenditure on clinical audit was on staff to provide the support necessary to enable health care professionals to participate in clinical audit activities. The Executive have not earmarked those funds provided to regions for clinical audit in primary care in the same way as they did for the hospital and community health services. The Executive commissioned studies on aspects of the development of clinical audit in primary care, but these could not provide a comprehensive breakdown of how each authority used its clinical audit monies. The NHS Executive expect regional health authorities to hold family health services authorities accountable for ensuring that the funds are used effectively.

Paragraphs 3.31and 3.32

14 The NHS Executive estimate that on average hospital doctors spend the equivalent of about half a day each month on clinical audit activities. On that basis, the cost of that time would amount to about £50 million a year. The Executive consider that, without considerable research, an estimate of the cost of the time which general practitioners, nurses and other health care professionals spend auditing their practice cannot be made with any confidence.

Further development of clinical audit

Paragraphs 4.1 to 4.6

15 The NHS Executive regard the initial phase of stimulating the introduction of clinical audit as complete. Under the management arrangements introduced for the National Health Service in April 1994 the responsibility for further development of clinical audit now rests with local purchasers and providers of health care, supported by the NHS Executive. On 1 April 1994 the Executive changed the arrangements for funding and monitoring clinical audit in line with the management changes, delegation of responsibility to the lowest operational level, and the general move away from centrally controlled funding of particular policy initiatives.

Paragraph 4.7

16 In February 1995, the NHS Executive appointed a consortium to set up and run a national clinical audit centre, which will act as a focal point for the dissemination of good practice identified locally.

Conclusions on the clinical audit initiative

17 At the NHS trusts and general practices visited there was evidence that progress had been made towards establishing clinical audit as a routine part of clinical practice. Not all health care professionals, however, were participating in the programme. There was also evidence that clinical audit had in some cases led to benefits to patients through improvements in health care.

18 The NHS Executive collected information which gives a general picture of the development of clinical audit which was stimulated by the initial investment of £218 million between 1989-90 and 1993-94. They supplemented this information by commissioning national and local surveys. They recognised that this information by itself was insufficient to determine how far clinical audit had become integrated into routine practice for all health care professionals, the overall cost of health care professionals' time spent auditing their practice, or the extent to which, at local level, the benefits resulting from clinical audit justified the costs.

19 The NHS Executive are devolving responsibility for the management, funding and the detailed monitoring of clinical audit to purchasers and providers of health care. The Executive intend that their regional offices will, as part of the routine performance management of health authorities, have a monitoring role in relation to clinical audit to ensure that the objectives of clinical audit policy are met. Detailed data collection by the NHS Executive will not form part of this but they propose, from time to time, to carry out sample surveys of local monitoring information in order to assure themselves that clinical audit continues to develop in accordance with their strategic aims. This approach requires that health authorities collect the necessary data in a way which permits comparisons.

Recommendations

The NHS Executive should collect data to assure themselves that hospital and community health trusts are carrying out effective clinical audit. To provide themselves with this assurance, the NHS Executive should ensure that monitoring data used by health authorities and hospital and community trusts are collected in a sufficiently consistent form to enable the NHS Executive to draw on those data as required, on a representative sample basis.

The **NHS Executive** should consider commissioning research to devise a practical cost-effective methodology to collect local data that will enable purchasers and providers of health care to assess the extent of clinical audit activity, the costs of auditing clinical care and the resulting benefits to patients.

Where they are not already doing so,

- **health authorities and general practitioner fundholders** should work with health care providers to ensure that the clinical audit they fund through the purchasing process contributes to improved patient care and provides assurance about the quality of care they are buying.

- **family health services authorities and their successors,** through their medical audit advisory groups or their equivalent, should work closely with general practitioners and other health care professionals to monitor the extent of participation in clinical audit, and help health care professionals to evaluate the costs and benefits of their clinical audit activity.

- **NHS hospital and community trusts** should monitor the resources they devote to audit of clinical care, and the resulting benefits for patients to ensure that they are carrying out clinical audit in a cost-effective way to meet the objective of improving patient care.

1. Clinical audit

Background

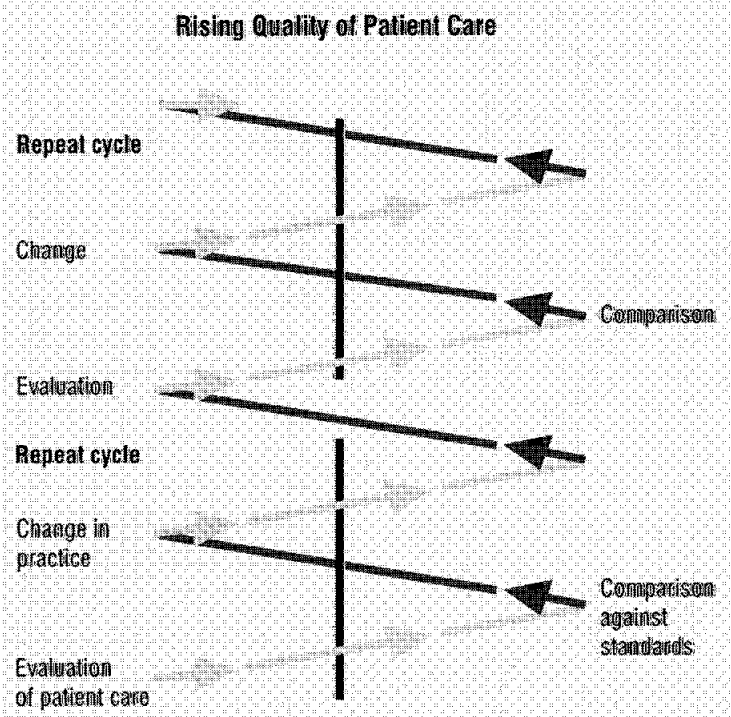
1.1 Clinical audit is a process in which doctors, nurses and other health care professionals systematically analyse the care and treatment they provide to patients. This process includes reviewing the procedures used for diagnosis, care and treatment; examining how associated resources are used; investigating the resulting outcome and quality of life for the patient; and making changes where necessary. Some health care professionals in the National Health Service have audited their practice for many years but it is only in recent years that the audit of clinical care has been encouraged by the NHS Executive as part of professional practice.

1.2 The primary objective of clinical audit is to improve the quality and outcome of care for patients. It is an important element of the NHS Executive's strategy to develop continuous quality improvement in the National Health Service. Auditing clinical care also has an educational purpose: the NHS Executive intend it to be an important component of continuing professional development and education, enabling health care professionals to update their knowledge and thereby improve their own clinical practice.

1.3 It is an important part of clinical audit that it should be repeated and changes in clinical care re-evaluated to contribute towards continuous improvement in the quality of patient care (see Figure 1 overleaf).

1.4 In this report, "clinical audit" covers the audit activities undertaken by all health care professionals including doctors, nurses and professions allied to medicine, whether in their own professional groups or as a clinical team. And the terms "medical audit", "nursing audit" and "therapy audit" refer to processes where doctors, nurses and therapists respectively have the care and treatment they provide to patients reviewed by colleagues from the same profession.

Figure 1: The Clinical Audit Spiral



Source: Dr Vasantha Kumar and Mr Peter M. Brown, "Quality in Health Care" (1992;2:142-143)

The introduction of audit of clinical care

1.5 The White Paper "Working for Patients" (Cmnd 555) sought to formalise medical audit by doctors in 1989. In the White Paper, the Government welcomed the initiatives already taken by the medical professions to foster medical audit and they sought to work closely with the professions to build on what had already been achieved. The initiative was extended to the nursing and therapy professions in 1991; and, in 1993, the separate medical, nursing and therapy programmes were integrated into a single clinical audit initiative involving all health care professionals in the National Health Service. Figure 2 opposite describes the chronology of events.

1.6 The purpose of the clinical audit initiative is to improve the quality of patient care by creating the conditions which would lead to the audit of clinical care becoming part of routine practice for all health care professionals.

Figure 2: The Evolution of the Audit of Clinical Care

1989 **Medical audit introduced**

White Paper, "Working for Patients" (Cmnd 555) published.

Working Paper 6, "Medical Audit", set out the fundamental aims and principles of medical audit and outlined how it would be introduced into the National Health Service in England.

1991 **Formal introduction of local medical audit committees**

Regions and districts established medical audit committees, chaired by senior clinicians, to plan and monitor the implementation of medical audit in the hospital and community health services.

Family health services authorities established medical audit advisory groups to support and monitor medical audit, covering all general practitioners.

Nursing and therapy audit introduced

The medical audit programme was expanded to include other health care professionals; the NHS Management Executive initiated a three year audit programme for nurses and therapists. Regional audit coordinators were appointed to lead the programme.

1993 **Clinical audit**

The NHS Management Executive announced that the medical, nursing, and therapy audit programmes were to be integrated into a single clinical audit programme.

1994 NHS Executive established

Funding clinical audit

The NHS Executive announced changes to the way clinical audit in the hospital and community health services was to be funded for 1994-95. Those funds previously provided directly and specifically from the NHS Management Executive were to be included in general allocations to regional health authorities. District health authorities were encouraged to use these funds to contract for clinical audit in the hospital and community health services.

1995 **Purchasers and clinical audit**

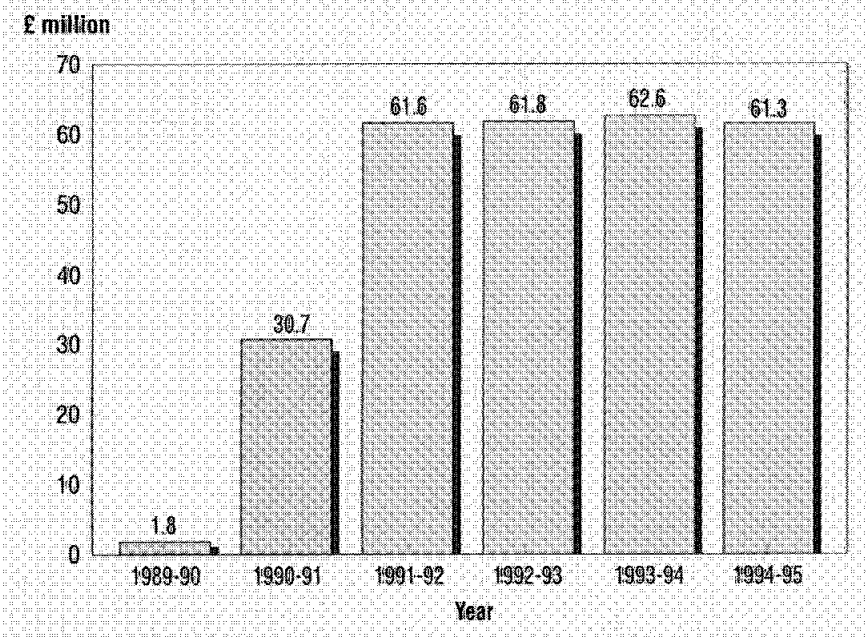
The NHS Executive announced that from April 1996, the new unitary health authorities (which will replace existing family health services authorities and district health authorities) will be charged with the responsibilities for the planning and development of clinical audit previously held by regional health authorities.

Monitoring clinical audit

The NHS Executive announced that, from April 1996, their regional offices will become responsible for monitoring clinical audit. The NHS Executive issued further guidance to the National Health Service on how the detailed monitoring of clinical audit might be performed from 1996-97.

1.7 Between 1989-90 and 1993-94, the NHS Management Executive provided some £218 million, mainly through allocations to the regional health authorities, for the introduction and development of clinical audit in the National Health Service. A further £61 million was provided in 1994-95, mainly included as an indicative amount within regions' general allocations (Figure 3). Although funds intended for clinical audit purposes are included in regions' general revenue allocations, from April 1995 the NHS Executive no longer separately identify those funds. It is the NHS Executive's intention that the costs to the hospital and community health services of clinical audit will be met through contracts with purchasers. Appendix 1 of this report describes the arrangements for funding the audit of clinical care.

Figure 3: Funding the Audit of Clinical Care, 1989-90 to 1993-94



Source: NHS Executive

This figure shows the funding provided between 1989-90 and 1994-95 for the introduction and development of the audit of clinical care in the National Health Service.

1.8 To a large extent, the success of clinical audit depends on the willingness of health care professionals to expose their practice to scrutiny by their colleagues. For many health care professionals this represents a significant challenge to their way of working. Against the background of other far-reaching changes in the organisation of the National Health Service, the NHS Executive sought the co-operation of the health professions in clinical audit by encouraging them to audit their practice voluntarily.

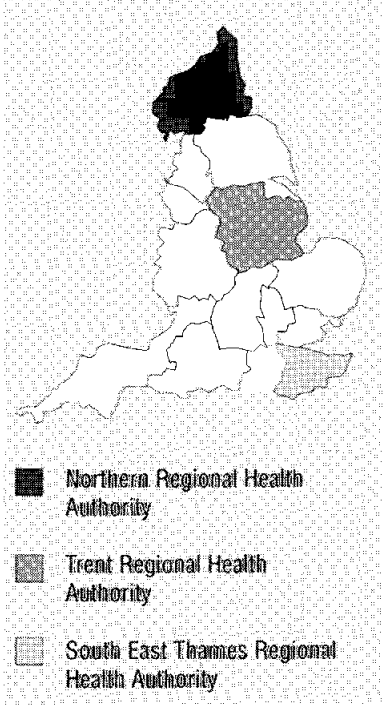
National Audit Office examination

1.9 The National Audit Office examined the progress made by the audit of clinical care initiative since 1989. The examination focused upon:

- the extent of clinical audit (Part 2);
- the benefits and costs of clinical audit (part 3); and
- the further development of clinical audit (Part 4).

1.10 In preparing this report, the National Audit Office also had regard to the recommendations set out in the Report of the Committee of Public Accounts on Auditing Clinical Care in Scotland (51st Report, Session 1993-94) and the Government's response to that Report (Cm 2754). Although the implementation of clinical audit in England and Scotland will reflect variations in local conditions and arrangements for delivering treatment to patients, the broad objectives of the initiative are the same in both countries. Appendix 2 to this report sets out the principal conclusions in the Committee's Report on Clinical Audit in Scotland, the Government's response, and references to the nearest corresponding passages in the present report by the National Audit Office.

Figure 4: The three regions visited by the National Audit Office



1.11 The National Audit Office visited three of the then 14 regional health authorities: Northern, Trent and South East Thames (Figure 4 shows locations) and, within those regions, eight NHS hospital trusts and six family health services authorities. They gathered evidence by interviewing medical, nursing and other health care professionals involved in clinical audit, and general management; by consulting the medical royal colleges; and by interviewing and obtaining national data from officials of the NHS Executive. The report also draws upon written sources of evidence such as health authorities' annual clinical audit reports. Appendix 3 sets out details of the methodology, and a list of sites visited and bodies consulted.

1.12 The National Audit Office are grateful to all those who contributed to this study.

2. The extent of clinical audit

Introduction

2.1 The NHS Executive intend that clinical audit should become part of routine practice for all health care professionals in the National Health Service. This part of the report examines the amount of clinical audit activity occurring at the sites visited; and the evidence available about levels of participation in clinical audit by doctors and other health care professionals in the National Health Service.

Clinical audit activity

2.2 This section of the report examines the evidence on the amount of clinical audit activity occurring in the hospital and community health services and in primary health care, and how the NHS Executive monitor this activity.

Hospital and community health services

2.3 The NHS Executive estimate that in 1993-94, the latest year for which information is available, over 20,000 clinical audit projects were undertaken in the hospital and community health services in England. This estimate is based on the number of clinical audit projects reported in the annual clinical audit reports of regional health authorities.

2.4 The term "clinical audit" covers a wide variety of types of project. At the sites visited many projects had been undertaken; some examples are set out below. Those clinical audit projects may be concerned with the environment in which health care is provided; with the care given to patients by health care professionals; or with the effects of care on the health status of patients.

Examples of clinical audit at the sites visited by the National Audit Office

Audit of communications with patients relating to discharge medication at West Cumbria Health Care NHS Trust	At West Cumbria Health Care NHS Trust, patients discharged from the coronary care unit participated in a clinical audit to assess their level of understanding and awareness about the medicines prescribed for them. The clinical audit showed that 77 per cent of patients understood the reason for the drug being prescribed and 31 per cent understood the side effects. The clinical audit led to the introduction of counselling to increase patients' understanding of the medicines prescribed to them. The clinical audit was repeated later, and found that knowledge of the reason for taking drugs rose to 94 per cent, and to 65 per cent for side effects. The Trust believe that the changes resulting from this clinical audit will lead to more patients taking drugs correctly as prescribed.
Aspirin audit at Durham Family Health Services Authority	A clinical audit project within the locality of the Durham Family Health Services Authority aims to increase the number of patients who take aspirin when known to have heart disease. For patients who already have heart disease, taking an aspirin every day reduces the risk of having another heart attack or a stroke. A pilot audit showed that only 50 per cent of patients who should have been taking aspirin were doing so. The Durham Medical Audit Advisory Group, therefore, set the standard that all patients who had heart attacks or suffered from angina should be prescribed low dose aspirin indefinitely. Those general practitioners participating in the audit are required to supply Durham Medical Audit Advisory Group with data on the number of their patients suffering from heart disease and adherence to the standard. This information is analysed and fed back to participating practices. The audit has resulted in heightened awareness among general practitioners of the benefits of aspirin in the treatment of heart disease, and encouraged general practitioners to ensure that their patients suffering from heart disease are taking aspirin regularly.
Audit of patients with high blood pressure at Bromley Family Health Services Authority	A clinical audit of the monitoring of patients with high blood pressure in a general practice in Bromley was carried out using standards set by the Royal College of General Practitioners. The results showed that patients were not receiving an acceptable level of assessment and follow up. The immediate benefit to patients was that remedial action was taken by the practice so that patients were monitored as they should have been, thus lessening the likelihood of complications developing undetected.
Asthma audit at Guy's Hospital Accident and Emergency Department	A clinical audit at Guy's Hospital accident and emergency department examined the care provided to people with asthma. The audit recorded the care patients received, and the follow up appointments provided to patients after they had left accident and emergency. The audit led to the development of new guidelines for the care of asthmatics which included the increased use of an observation ward; where appropriate, giving patients a one week course of oral steroids on discharge; and ensuring that all patients are referred for an appointment with either their general practitioner or at a hospital outpatients clinic after leaving the department. The clinical audit of asthmatic care was repeated to assess how successfully the guidelines had been implemented and led to new proposals being made to improve patient care further.
Telephone line audit at Nottinghamshire Family Health Services Authority	An audit project carried out by a general practice in Nottinghamshire Family Health Services Authority assessed the need for a second telephone line to the surgery. The audit found that, on average, it took a patient less than two attempts to get through to the practice's receptionist but that the range varied between one and four calls. The audit resulted in the installation of a second telephone line to reduce the number of attempts patients had to make before their call to the practice was answered, thus leading to an improved service for patients.

Continued.....

Examples of clinical audit at the sites visited by the National Audit Office (cont.)

Audit of ankle fractures undertaken by the Royal College of Surgeons of England	The Royal College of Surgeons of England have undertaken an audit project assessing the management of ankle fractures. Over 1,000 fractures were surveyed in centres throughout England and Wales. Guidance on the care of ankle fractures has been produced as a result of this project.
Audit of diagnosis in Trent Regional Health Authority	Trent Regional Health Authority provide funds to help support a region wide scheme for assessing the quality and accuracy of histopathological diagnosis. Histopathology is concerned with microscopic examination of smears and tissues, to detect abnormalities. The aim of the programme is to improve standards of diagnosis. Participating histopathologists are required to submit to a regular test in which they analyse slides; the quality and accuracy of the diagnoses are assessed by an external peer review group. Individual participants get feedback on their performance in relationship to the participating group as a whole. Potentially dangerous errors can be identified, and individuals can note areas of diagnostic difficulty which could be addressed by further training. This scheme contributes to professional development and education.
Audit of inpatient suicides at Newcastle Mental Health NHS Trust	An audit of inpatient suicides at Newcastle Mental Health NHS Trust, now part of Newcastle City Health NHS Trust, has recommended that guidelines and standards be developed in relation to the procedure which should be followed after a suicide occurs, and the management of patients at risk from deliberate self harm. Furthermore, the Trust are to implement critical incident audits, in line with health service guidance, following a suicide.

Table 1: Clinical audit projects undertaken in 1993-94 in the hospital and community health services at three regional health authorities

Regional health authority	Clinical audit projects undertaken
Trent	2,994
Northern	2,117
South East Thames	1,872
Total	**6,983**

Source: Reports of the three regional health authorities visited by the National Audit Office

2.5 The three regional health authorities visited reported that during 1993-94 almost 7,000 clinical audit projects were undertaken in the hospital and community health services within their boundaries. Table 1 shows the number of clinical audit projects undertaken during 1993-94 in each of the three regions visited.

2.6 At the eight NHS trusts visited, some 1,400 clinical audit projects were undertaken in 1993-94 (Table 2 opposite). These projects were concerned with a wide range of topics, examples of which are shown above.

Monitoring the audit of clinical care in the hospital and community health services

2.7 The NHS Executive have monitored the progress of the medical, and nursing and therapy, audit programmes in the hospital and community health services through regional annual clinical audit reports and through visits to the regional health authorities. Those reports are based upon the annual clinical audit reports of district health authorities and NHS trusts within each region's boundaries. Before April 1994, it was the NHS Management Executive's policy to release clinical audit monies to regions for the forthcoming financial year only upon receipt of a satisfactory annual clinical audit report on the progress of the initiative. To achieve the standard required, reports had to meet the Executive's requirements concerning format and content, and had to assure the Executive that progress in

Table 2: Clinical audit projects undertaken in 1993-94 at eight NHS hospital trusts

NHS trust	Clinical audit projects undertaken
Northern General, Sheffield	339
Leicester Royal Infirmary	298
Doncaster Royal Infirmary	271
Guy's and St Thomas'	203
Brighton	192
North Tees	67
West Cumbria	42
Newcastle Mental Health	29
Total	**1,441**

Source: Reports of the three regional health authorities and the eight NHS hospital trusts

carrying forward the clinical audit initiative was satisfactory. On one occasion clinical audit monies were withheld because a report had failed to satisfy the Executive's criteria.

2.8 The data contained in regional health authorities' annual clinical audit reports give a general picture of the development of the initiative. They need, however, to be interpreted with caution. Some of the NHS trusts visited stated that they were not certain that all clinical audit projects taking place at their trust were included in their reports, and that regional health authorities' records of clinical audit activity might thus be understated. Also, some reports on clinical audit activity in NHS trusts had comprehensive documentary evidence to support them; others had very little.

2.9 Caution is also needed in the interpretation of the reports because NHS trusts differed in their definition of a completed project. Some trusts defined the simple collection of data or observation of clinical practice as completed clinical audit projects. Others classed projects as completed only when information on current practice had been collected; the results had been assessed against pre-determined criteria and standards; and any need for change in practice or criteria had been identified.

2.10 In addition, the NHS Management Executive found that the information provided in the annual clinical audit reports from the regional health authorities varied greatly in format and the level of detail, making comparison and analysis problematic.

2.11 In the light of these variations, for the 1993-94 annual clinical audit reports, the NHS Management Executive identified more clearly the data they required. This change improved the usefulness of the data in the monitoring process, enabling the NHS Executive to estimate more accurately the amount of clinical audit activity occurring. The Executive recognise that some differences in the interpretation of clinical audit activity remain, but they believe that the data contained in annual reports were sufficient to inform them of broad trends in the progress of the clinical audit initiative.

Family health services

2.12 The NHS Executive do not systematically collect information on the number of clinical audit projects undertaken in the family health services. General practitioners are not required to supply data about their clinical audit activities to their medical audit advisory groups. And those groups are required only to provide a regular report on the general results of the clinical audit programme to their family health services authorities. The NHS Executive believe that

selectively commissioned studies provide a more cost-effective means of monitoring the progress of clinical audit in the family health services than routine collection of clinical audit data by the centre. Between 1991 and 1994, the NHS Management Executive commissioned eight studies of the progress of clinical audit in the family health services. The studies included a national survey of medical audit advisory groups ("National MAAG Survey 1992-93", Birmingham Medical Audit Advisory Group, 1994) and an examination of the role of medical audit advisory groups in two regional health authorities ("Audit of Medical Audit Advisory Groups", Humphrey and Berrow, 1993).

2.13 The studies completed to date provide the Executive with information about the activities of medical audit advisory groups, the staff supporting those activities, the funding of medical audit advisory groups, how medical audit advisory groups promote clinical audit locally, the role of family health services authorities in supporting clinical audit, and the types of changes in clinical practice resulting from clinical audit. The studies do not, however, enable the Executive to quantify precisely how much clinical audit activity was taking place in the primary health care sector.

Participation by health care professionals in clinical audit

2.14 This section of the report examines the evidence available about levels of participation in clinical audit by doctors in the hospital and community health services and general practice, and also the extent of involvement by other health care professionals in the National Health Service.

Hospital doctors

2.15 As part of the general move away from collecting detailed statistics on health service activity in favour of a devolved management approach, the NHS Management Executive decided to adopt selective monitoring of participation in the clinical audit process. In order to avoid subjective or impractical measures of participation, the NHS Management Executive monitored only the number of doctors attending clinical audit meetings within their specialties as a proxy measure of the extent of participation in clinical audit. The Executive recognised that data about the numbers attending an audit meeting provided a limited measure of doctors' involvement in the process of clinical audit.

2.16 In order to gain a clearer impression of the progress of the clinical audit initiative, the NHS Management Executive commissioned CASPE Research (Clinical Accountability Service Planning and Evaluation), a research organisation who specialise in the health services, to review the organisation and development of clinical audit by doctors, nurses and therapists in the hospital and community health services. CASPE Research's questionnaire survey of provider units in the hospital and community health services during 1993 found that 83 per cent of consultants and 77 per cent of junior doctors attended most or all of their specialty's audit meetings.

2.17 In the NHS trusts visited all, or the majority of, hospital specialties were participating in clinical audit activities, though some specialties were more active than others. Those hospital doctors interviewed at the sites visited said that clinical audit had become an expected part of their professional practice. In some instances, NHS trust managers had set aside "protected time" to allow doctors to participate in clinical audit activities. For example, doctors at West Cumbria Health Care NHS Trust and the Northern General NHS Trust, Sheffield, were allowed two hours each month to attend clinical audit meetings.

2.18 Participation in clinical audit has also become a requirement for the accreditation of training posts by some medical royal colleges, for example, the Royal College of Surgeons of England.

General practitioners

2.19 Although the NHS Executive do not systematically collect information about the participation of individual general practitioners in clinical audit, they commissioned a survey of the work of all medical audit advisory groups. The survey report found that in 1993-94, 86 per cent of general practices were participating in some form of clinical audit. It also stated that the variety of methods used for collecting information about clinical audit in primary care made the confirmation of the absolute level of participation in clinical audit difficult. The family health services authorities visited by the National Audit Office estimated that an average of 82 per cent of general practices were participating in clinical audit activities.

Nursing and therapy services

2.20 At all the sites visited, there was evidence that the nursing and therapy professions were participating in clinical audit. It is not possible, however, to estimate overall levels of participation by these

professions, either nationally or locally, as there is insufficient information on the numbers of nurses and therapists who audit their practice.

3. Benefits and costs of clinical audit

Introduction

3.1 The primary purpose of clinical audit, to improve patient care, can be achieved through changes in clinical practice, changes in the organisation and management of health care services, or by confirming that the care provided meets acceptable standards and is delivered cost effectively. This part of the report examines the benefits to patients of clinical audit, the costs associated with this initiative, and the way in which the NHS Management Executive funded the initiative up to 1993-94. Developments since 1993-94 are dealt with in Part 4.

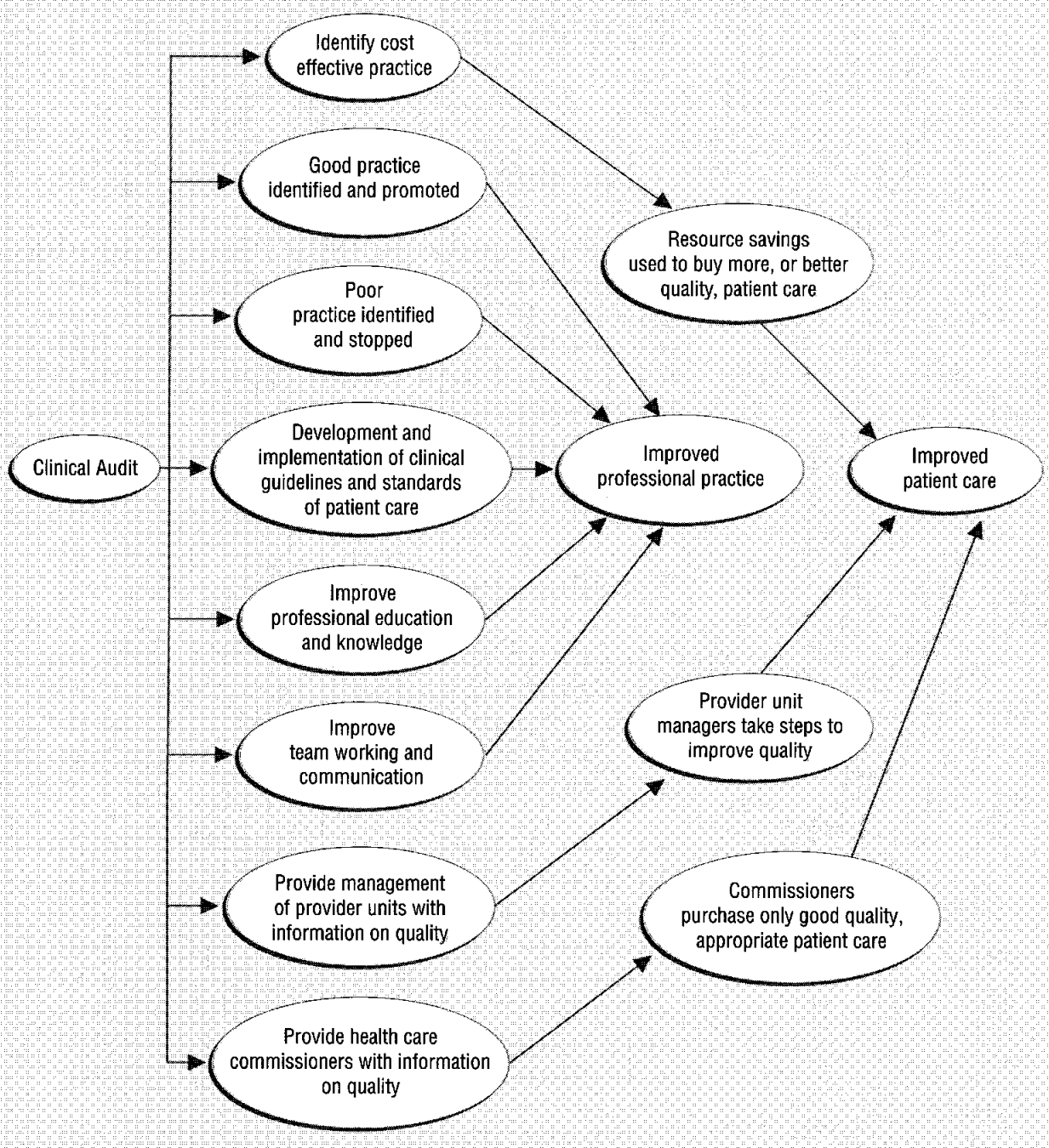
Benefits to patients

3.2 This section describes some of the changes in clinical practice, organisation and management that have occurred as a result of clinical audit in the National Health Service and at the sites visited; and examines the NHS Executive's work to evaluate the national clinical audit initiative.

3.3 It is difficult to estimate the impact of the clinical audit initiative on the quality and outcomes of patient care on any simple, straightforward basis. The effects of changes in clinical care on the quality and outcome of care are often diverse, and measures of outcomes tend to be subjective; the outcome for patients may often not be evident for a considerable period of time and may vary from patient to patient; and separating out those improvements attributable solely to the clinical audit process is difficult.

3.4 Clinical audit may lead to improvements in patient care in different ways. Figure 5 overleaf illustrates routes through which it can do so.

Figure 5: Improving patient care through clinical audit



Source: Reproduced with the permission of the Health Care Evaluation Unit, St George's Hospital Medical School, Tooting, London.

Changes in clinical practice, organisation and management

3.5 There is evidence from the sites visited that changes are occurring in clinical practice, organisation and management, and that the clinical audit process is helping to promote the use and development of clinical guidelines. A clinical guideline is a systematically developed statement which assists in decision making about appropriate health care for specific clinical conditions. The three regional health authorities visited reported that about one third of clinical audit projects undertaken in the hospital and community health services during 1993-94 had led to changes in clinical care, and about one in four involved the use or development of clinical guidelines. Clinical audit need not always lead to change; in some instances it may provide assurance that the care provided conforms to satisfactorily high standards of practice and care. About one in six clinical audits were being repeated to assess whether the new standards of care resulting from the original audit were being complied with, and to identify any further improvements that could be made to patient care (Table 3). At the NHS trusts visited, one third of clinical audit projects had led to changes, one in three involved the use or development of clinical guidelines, and one in four clinical audits were being repeated (Table 4 overleaf).

Table 3: Results of clinical audit projects undertaken in 1993-94 in the hospital and community health services at three regional health authorities

Regional health authority	Clinical audit projects undertaken	Changes made as a result of clinical audit	Clinical guidelines used or developed	Standards used or resulting from audit	Clinical audits repeated
Trent	2,994	983	845	633	386
Northern	2,117	699	424	507	425
South East Thames	1,872	698	413	359	412
Total	**6,983**	**2,380**	**1,682**	**1,499**	**1,223**

Source: Reports of the three regional health authorities visited by the National Audit Office

Table 3 shows that about one third of clinical audit projects undertaken in the hospital and community health services during 1993-94 had led to changes in clinical care, and about one in four involved the use or development of clinical guidelines.

Table 4: Results of clinical audit projects undertaken in 1993-94 at eight NHS trusts

NHS trust	Clinical audit projects undertaken	Changes made as a result of clinical audit	Clinical guidelines used or developed	Standards used or resulting from audit	Clinical audits repeated
Northern General, Sheffield	339	9	49	15	12
Leicester Royal Infirmary	298	136	136	106	89
Doncaster Royal Infirmary	271	79	131	104	17
Guy's and St Thomas'	203	54	36	52	102
Brighton	192	118	71	-	66
North Tees	67	9	18	-	48
West Cumbria	42	18	6	8	5
Newcastle Mental Health	29	16	10	3	3
Total	**1,441**	**439**	**457**	**288**	**342**

Source: Reports of the regional health authorities and the eight NHS trusts visited by the National Audit Office

Table 4 shows that over 400 changes in clinical care were made following the 1,441 clinical audit projects undertaken at the NHS hospital and community health trusts visited by the National Audit Office.

3.6 Reported changes in clinical care resulting from clinical audit ranged from specific changes in clinical practice, organisation and management that had directly led to improved quality of patient care and outcomes, to a generalised perception of improved team working and morale or increased awareness of an aspect of patient care among health care professionals that might indirectly lead to improvements in the quality of patient care.

3.7 At the sites visited, there were examples of identifiable improvements in patient care as a result of clinical audit. For example, in West Cumbria Health Care NHS Trust, a clinical audit by nurses of the assessment of patients at risk of developing pressure sores showed that many different methods of assessment were used, there was no consistent monitoring of the results and no pressure relieving mattresses were available for patients at risk. The Trust took action in all three areas: there are now improved systems in place to increase the likelihood that those at risk of developing pressure sores are identified as soon as possible; those patients are now monitored more closely to ensure early detection and

treatment; and 14 special mattresses have been purchased for those patients suffering from, or at risk of developing, pressure sores to ease their discomfort and more effectively treat their condition, or reduce the risk of sores occurring. As a result of their monitoring, the Trust conclude that patient care in this area has improved, and that, in addition, resource savings will be generated by reduced incidence of pressure sores, reduced treatment costs and shorter hospital stays.

3.8 Other changes which may lead, more indirectly, to improvements in patient care were reported as a result of clinical audit. An example of this was a clinical audit within the breast screening service involving the departments of surgery and radiology at North Tees Health NHS Trust. The audit examined the length of time taken between initial referral to the breast clinic and final diagnosis. It led to the introduction of new guidelines and the re-organisation of the clinic. Following the clinical audit, 85 per cent of the women referred to the clinic received a diagnosis within four weeks of referral compared with 28 per cent before.

3.9 The sites visited also reported clinical audits which had led to improved efficiency in the use of health care services, or to services which are more sensitive to patients' needs. An example of a clinical audit producing both these benefits is the "Talkback Project" run by the South Tyneside Medical Audit Advisory Group. A group of general practice managers and general practitioners are helping local practices to find out more about their patients' views on the nature and quality of health care services provided. The results of a patient survey were made known to the participating practices and several changes have been introduced as a result:

- one general practice increased the number of appointments available for patients by 15 per cent;
- a fixed time has been set aside each day for a general practitioner to be available to speak to patients on the telephone where an immediate appointment is not possible;
- a practice charter has been introduced;
- 'repeat' appointments have been reduced to make more 'new' appointments available; and
- an initiative has been introduced to reduce the number of patients who fail to attend for their appointments.

National evaluation

3.10 The NHS Management Executive published four reports – one in 1993, and the other three in 1994 – which reviewed the progress of the clinical audit initiative (Table 5).

Table 5: National evaluation reports published by the NHS Executive

Title	Date of Publication
Medical Audit in the Hospital and Community Health Services	December 1993
Medical Audit in Primary Care	February 1994
Clinical Audit in the Nursing and Therapy Professions	February 1994
Medical Audit Activities of the Royal Colleges and their Faculties in the United Kingdom.	February 1994

3.11 The reports on medical audit in the hospital and community health services and clinical audit in the nursing and therapy professions were based mainly on information taken from the annual medical, and nursing and therapy, audit reports of regional health authorities for 1992-93. The report examining medical audit in primary care brought together evidence from a number of reviews commissioned by the Executive, including two national surveys of medical audit advisory groups in 1991-92 and 1992-93. The report reviewing the medical audit activities of the royal colleges collated details of national clinical audit projects that they had completed, were in progress, or were in the planning stage.

3.12 The reports did not set out to assess the effect of clinical audit on the quality of patient care or outcomes. The main conclusion the Executive drew from the reports was that, despite difficulties in interpreting the evidence available and the sometimes incomplete nature of information about clinical audit activities, clinical audit was having a significant impact on clinical practice and organisation.

3.13 In 1994, CASPE Research published two reports examining the progress of clinical audit by doctors in the hospital and community health services ("The development of audit") and the involvement of purchasing health authorities in clinical audit ("The role of the commissioner in audit"). The report on the development of clinical audit concluded that clinical audit had been established as part of clinical practice and health care provision in the hospital and community health services, and that it had caused or facilitated change in a wide range of areas.

3.14 In 1995, CASPE Research published a further report on clinical audit by hospital doctors in the English National Health Service: "Provider audit in England: a review of twenty-nine programmes". Among the main conclusions of the report were:

- the monitoring of the progress of programmes was difficult due to a general lack of well focused objectives and low quality data being reported;

- attendance at audit meetings was generally high, but further participation in clinical audit was at a rather lower level. Providers believed, however, that commitment had grown in the three year period;

- the nature of changes reported as arising from clinical audit was diverse, although relatively few directly affected the quality of health care delivered to patients. Most changes focused on the health care delivery process which could be expected to affect patients indirectly.

3.15 Also in 1995, CASPE Research published a report entitled: "The audit activities of the medical royal colleges and their faculties in England". The report concluded that the colleges had had a significant role in promoting clinical audit within the medical professions during the early days of development, and that the programmes were generally successful. The NHS Management Executive had adopted a non-prescriptive approach to this professional area of audit that had led to programmes which were uncoordinated and priorities which were self-selected rather than national in nature; and there was little possibility of evaluation since the objectives of the programmes were often poorly defined. It also noted that there had been little formal evaluation of the outcome of college clinical audit activities.

The costs of auditing clinical care

3.16 This section of the report examines the use made of funds provided to the National Health Service to promote and develop clinical audit, the way in which the NHS Management Executive made these funds available up to 1993-94, and the availability of data about the cost of the time spent by health care professionals on clinical audit activities.

The use of central funds for the audit of clinical care

3.17 Between 1989-90 and 1993-94, the NHS Management Executive provided over £218 million to introduce and develop the audit of clinical care in the National Health Service. Most of this money was allocated to the regional health authorities who were required to distribute those funds to the district and family health services authorities within their boundaries: £151.1 million was provided to

the regions for implementing audit by doctors, nurses and therapists in the hospital and community health services (this figure includes £3.2 million additional funds provided in 1993-94 to encourage multi-professional clinical audit); and £37.7 million to promote and support audit in primary care. In addition to these amounts, the Executive retained £24.3 million centrally to fund the clinical audit programmes of the medical royal colleges and specific clinical audit projects considered to be of national significance; £4.5 million to fund national initiatives in the audit of primary care, and £0.9 million to support national initiatives in the nursing and therapy audit programme. A further £61.3 million was provided in 1994-95, mainly included as an indicative amount within general allocations to regional health authorities. (Details of these amounts are set out in Table 6 and paragraphs 3.18 to 3.29.)

Table 6: Funding for the audit of clinical care, 1989-90 to 1994-95

	Medical Audit in the Hospital and Community Health Services			Nursing and therapy audit	Clinical audit	Primary care[1]	Total
	Funds retained centrally		Hospital doctors' medical audit				
Year	Clinical audit projects £m	Medical royal colleges £m	£m	£m	£m	£m	£m
1989-90	0.1	0.2	1.5	-	-	-	1.8
1990-91	0.5	0.9	24.3	-	-	5.0	30.7
1991-92	4.0	1.2	41.6	2.3	-	12.5	61.6
1992-93	8.3	1.5	32.3	7.2	-	12.5	61.8
1993-94	5.8	1.8	31.4	8.2	3.2	12.2	62.6
Total, 1989-90 to 1993-94	**18.7**	**5.6**	**131.1**	**17.7**	**3.2**	**42.2**	**218.5**
1994-95	4.7	1.4	1.4	-	41.4[2]	12.4	61.3

[1] Approximately £1.5 million was retained centrally each year from 1991-92 to support national initiatives in the audit of primary care.

[2] In 1994-95, those funds previously provided to the regional health authorities to support the separate medical and nursing and therapy audit programmes were consolidated. This figure represents an indicative amount included in general allocations to regional health authorities, as notified by the NHS Executive.

Source: NHS Executive

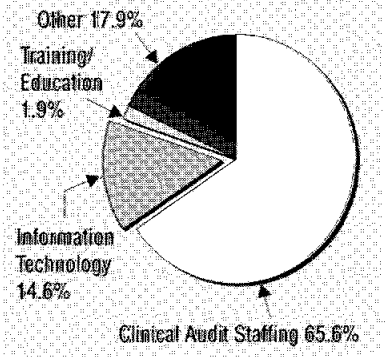
Table 6 shows that between 1989-90 and 1993-94 over £218 million was provided to support the clinical audit programme in the National Health Service in England. A further £61 million was provided in 1994-95, mainly included as an indicative amount within regions' general allocations.

Clinical audit in the hospital and community health services

3.18 Up to March 1994, the Executive earmarked specific funds for introducing and developing clinical audit by doctors in the hospital and community health services (Table 6). Money provided for earmarked purposes must be spent to support the activities for which the funding is intended. The distribution of funds between regional health authorities was based on numbers of consultant medical staff in post in each region. Decisions on how those funds should be spent were delegated to local medical audit committees chaired by senior clinicians.

3.19 The Executive delegated accountability for the detail of spending on implementing clinical audit to regional health authorities. Regional health authorities were required to account for the sums allocated to them for clinical audit purposes in financial statements contained in their annual clinical audit reports. These statements were expected to provide a summary breakdown of revenues and the allocations made to district health authorities during the financial year.

Figure 6: Application of clinical audit funds at the NHS trusts visited by the National Audit Office, 1993-94



Source: Annual clinical audit reports of the NHS trusts visited by the National Audit Office

3.20 During 1993-94, expenditure on clinical audit activity at the eight NHS hospital trusts visited averaged about £134,000. The clinical audit reports of the NHS trusts visited indicate that in 1993-94 about two-thirds of expenditure on clinical audit was on staff to provide the support necessary to enable health care professionals to participate in clinical audit with minimum disruption to their other clinical activities. Spending on information technology systems to support clinical audit amounted to a further seventh of expenditure in the same year (see Figure 6).

Primary Care

3.21 The Executive did not set aside specific funds for implementing clinical audit in primary care in the same way as they had for the hospital and community health services. Instead, they included in regional health authorities' general revenue allocations amounts totalling £37.7 million in the years 1990-91 to 1993-94 to cover the costs of introducing and developing clinical audit in primary care as part of the development of primary care generally. A further £4.5 million was retained centrally for spending on projects to develop clinical audit methods and to help establish local expertise.

3.22 In January 1991, in response to earlier representations from regional health authorities that the Executive should indicate the size of the provisions designated for specific policy initiatives included in general allocations, the Executive wrote to the regions identifying the amounts built into their recurring allocations for

family health services authorities including the implementation of clinical audit in primary care. The regions had discretion, however, over the amounts they devolved to family health services authorities, and the funds provided to implement clinical audit locally were determined through negotiations between family health services authorities and their medical audit advisory groups.

3.23 As part of the Executive's general move away from detailed data collection on local activity and greater devolution of responsibility to health authorities, they commissioned studies on aspects of the development of clinical audit in primary care. These survey data, however, could not provide a detailed picture of the amounts provided for clinical audit in the family health services or a comprehensive breakdown of how each authority used its clinical audit monies, though the data did provide a guide to this. Detailed accountability for medical audit advisory group spending was through family health services authorities to whom medical audit advisory groups were required to report. Family health services authorities were in turn held accountable for ensuring that funds were used effectively by the regional health authorities.

3.24 Most of the money the family health services authorities visited spent on general practice audit in 1993-94 was on staff to help general practitioners audit their practice, and to coordinate clinical audit activities across the authority.

Nursing and therapy services

3.25 The Executive provided £17.7 million between 1991-92 and 1993-94 to establish a programme of nursing and therapy audit in the hospital and community health services (Table 6). Of this, the Executive retained £926,000 for national initiatives such as the development of nursing guidelines and standards in mental health, primary care and midwifery, and to fund a national nursing and therapy audit conference.

3.26 The remaining £16.8 million was allocated to the 14 regional health authorities, on a regional population basis, to establish nursing and therapy audit in the hospital and community health services. Regions were given considerable discretion over the deployment of these funds and, in the regions visited, a range of implementation strategies had been adopted.

3.27 South East Thames Regional Health Authority decided to stimulate the development of nursing and therapy audit by funding specific projects. Since the scheme started, over 30 projects had been funded. Trent Regional Health Authority created a region-wide

network of audit coordinators. They have funded, or part-funded, the appointment of 50 audit coordinator posts at hospitals in the region. And Northern Regional Health Authority supported a mixed strategy. They funded a regional audit facilitator and sub-regional audit facilitators based within trusts and provider units; and supported a programme of 45 clinical audit projects.

Medical royal colleges

3.28 The NHS Executive, as part of their strategy to promote clinical audit as an educational activity, provided funding to the medical royal colleges who play a major role in post graduate medical education and the accreditation of hospital posts for training purposes (Table 6).

3.29 The Executive provided those funds to enable the medical royal colleges to set up clinical audit offices within each college to develop audit activity within their professional specialty; to hold educational events such as conferences and seminars on audit related topics and issues; and to develop clinical guidelines for use by their members. The royal colleges also received a large part of the £18.7 million retained centrally by the Executive to fund clinical audit projects designated as being of national significance (Table 6). They have an important role in the management or endorsement of these projects and in the national dissemination of the outputs.

Cost of health care professionals' time spent auditing clinical care

3.30 In addition to the direct costs of funding the clinical audit programme there are also costs associated with the time spent by health care professionals auditing their practice.

3.31 As noted at paragraph 2.1, the Executive intend that clinical audit should become a part of routine practice for all health care professionals. Because of this integration into routine practice, the National Health Service do not generate data on time, or the cost, of health care professionals' involvement in clinical audit activities. The Executive estimate that on average hospital doctors spend the equivalent of about half a day per month on clinical audit, but this will vary according to local circumstances. On that basis, the National Audit Office estimate that the cost of the time of the 43,800 (whole time equivalent) hospital doctors employed by the National Health Service, at an average cost for pay only of £96 per half day (1992-93 rates), would amount to about £50 million a year.

3.32 The Executive consider that, without considerable research, it is not practicable to estimate the time which general practitioners, nurses and other health care professionals spend on auditing their practice. A reliable estimate of the cost of those health care professionals' time spent on clinical audit is not therefore currently available.

4. Further development of clinical audit

Introduction

4.1 It is the NHS Executive's view that the initial phase of stimulating the introduction of clinical audit has been completed, and clinical audit is being allowed to move into a new phase where it is to be integrated within the contracting process. Major responsibility for the further development of clinical audit now rests with local purchasers and providers of health care, supported by the NHS Executive. To reflect that shift in responsibility, and to accommodate the NHS Executive's general move away from centrally controlled funding of particular policy initiatives and the collection of detailed statistics on health service activity, the Executive have made changes, effective from April 1994, in the way they fund and monitor the clinical audit initiative. This part of the report sets out those changes, and the Executive's proposals for disseminating good practice.

Changes effective from April 1994

Funding

4.2 The NHS Executive replaced the NHS Management Executive on 1 April 1994. The new NHS Executive changed the system for funding the audit of clinical care in the hospital and community health services through regional health authorities. Those funds previously provided directly and specifically from the centre to regional health authorities are now included in regions' general revenue allocations in proportion to resident population. Furthermore, the Executive ceased to earmark those monies to support clinical audit activities. From April 1995, the Executive no longer separately identify funding intended for clinical audit purposes in regional health authorities' general allocations; the costs associated with such work are met from contracts between purchasers and providers for undertaking a programme of clinical audit. It is the NHS Executive's intention that clinical audit in the

hospital and community health services will ultimately be funded through contracts for clinical services. The NHS Executive, while still emphasising that clinical audit should be professionally led, envisage a more active role for purchasers, including the negotiation of specific topics to be audited. They have recommended that, in future, 40 per cent of clinical audit funds should be used for projects which reflect the priorities of the purchaser.

4.3 CASPE Research found in their review of the role of the purchaser in the audit of clinical care that, where contracts for audit existed, they applied to the NHS trust as a whole and were broad in their terms. Health authorities purchasing services from the NHS trusts visited, however, were in the process of developing more specific contracts covering clinical audit. Some purchasing authorities were already beginning to influence the content of trusts' clinical audit programmes by negotiating topics for audit in areas in which they were interested, or which were local health priorities. For example, the principal purchaser at West Cumbria Health Care NHS Trust, North Cumbria Health Authority, was actively involved in setting the clinical audit agenda and had, following negotiations with the Trust, agreed 51 audit topics for 1994-95.

Monitoring

4.4 As part of their general move towards devolution of responsibility for routine business, the NHS Executive have issued guidance which indicates that the detailed monitoring of the clinical audit programme is now the responsibility of individual purchasers and providers of health care; and further guidance on how this detailed monitoring role might be performed from 1996-97. The purpose of monitoring clinical audit is to ensure that the performance of the function leads to:

- changes in clinical practice, organisation and the management of health care services and;

- improvements in the quality of patient care and health outcomes by keeping under review the extent to which clinical audit impacts on clinical care, and the value (and costs) of this form of investment by the National Health Service.

4.5 The eight regional offices of the NHS Executive will from April 1996 have a monitoring role in relation to clinical audit as part of the routine performance management of health authorities; from 1996 they will be responsible for ensuring that appropriate monitoring systems are in place to judge the performance of purchasers so that the objectives of clinical audit policy are met. The role of the NHS

Executive headquarters will be to oversee these activities. They plan, from time to time, to undertake sample surveys of locally collected monitoring information to provide assurance that clinical audit continues to develop in accordance with their strategic aims.

4.6 CASPE Research's report on the role of the purchaser in the audit of clinical care noted that monitoring of clinical audit by health authorities was largely paper based, and relied on annual clinical audit reports, project reports and other materials from the hospitals and community health services from which they purchased health care services. Many purchasers were dissatisfied with the quality and completeness of those documents, and expressed a strong interest in receiving from their health care providers more and better quality information about the progress and impact of clinical audit.

Disseminating good practice

4.7 In February 1995, the NHS Executive appointed a consortium led by the British Medical Association and the Royal College of Nursing to set up and run a national clinical audit centre. The Executive intend that the centre will act as a focal point for the dissemination of good practice which has been identified locally, and that it will provide a database of successful clinical audits. In this way, the lessons arising from clinical audits carried out by hospitals, general practitioners and health authorities will become more accessible to health care professionals across the National Health Service.

Appendix 1

Funding for the audit of clinical care

Between 1989-90 and 1993-94, the NHS Management Executive provided some £218 million for the introduction and development of clinical audit in the National Health Service (see Table 6).

Hospital and community health services

During that time, the Executive set aside money from the National Health Service budget to provide specific funding for the audit of clinical care by doctors in the hospital and community health services, for projects of national significance and work by the medical royal colleges. Most of this money (£131.1 million) was allocated to the regional health authorities specifically and only for the support of clinical audit. The distribution of funds between regions was based on numbers of consultant medical staff in post in each region. Regional health authorities were expected to pass on these funds to district health authorities to support activities approved by the regional health authority as part of their annual audit programme.

From April 1994, the NHS Executive changed the system for funding the audit of clinical care through the regional health authorities. Money previously set aside from the National Health Service budget was returned to regional health authorities' general revenue allocations. This development was in line with the NHS Executive's wish to reduce the level of funds retained centrally. The formula for distributing funds between the regions was also changed: money identified for clinical audit purposes is now allocated in proportion to resident population. The NHS Executive continue to retain some funds centrally to support national projects and the work of the medical and other professional royal colleges.

From April 1995, the NHS Executive no longer separately identify funds intended for clinical audit purposes in regional health authorities' general revenue allocations. The costs associated with such work are met from contracts between purchasers and providers for undertaking a programme of clinical audit. It is the Executive's intention that the costs to the hospital and community health services of clinical audit are to be met in time through contracts for clinical services.

Primary care

Because of different structures and management arrangements in the family health services, the NHS Management Executive did not earmark those funds provided to regional health authorities for audit in primary care – some £37.7 million between 1990-91 and 1993-94 – in the same way as they had for the hospital and community health services. Instead, the Executive included funds intended to cover the costs of implementing the audit of primary care in regions' general revenue allocations.

Regions had discretion over the amounts they devolved to family health services authorities, and the funds provided to implement clinical audit locally were determined through negotiations between family health services authorities and their medical audit advisory groups.

Medical audit advisory groups are accountable to their family health services authorities for the use of resources, and they are required to produce annual reports on the progress of primary care audit in their area.

A further £4.5 million was retained centrally by the Executive for spending on a programme of national initiatives to develop clinical audit methods and to help establish local expertise.

Nursing and therapy audit

Between 1991-92 and 1993-94, the NHS Management Executive set aside some £17.7 million from general revenue allocations to the National Health Service to support the nursing and therapy audit programme. Of this sum, the Executive retained centrally £0.9 million to spend on national initiatives such as the development of national guidelines and standards and to fund a national nursing and therapy audit conference.

In April 1994, those funds were returned to regions' general revenue allocations, together with the funds for medical audit in the hospital and community health services, and were distributed in proportion to the resident population of regional health authorities.

Accountability

For hospital and community health services, regional health authorities are required to account for the sums allocated to them for clinical audit purposes in financial statements contained in their

annual clinical audit reports. These statements are expected to provide a summary breakdown of revenues and the allocations made to district health authorities during the financial year.

For primary care, regional health authorities are expected to hold family health services authorities accountable for ensuring that the funds are used effectively.

Appendix 2

Committee of Public Accounts' principal conclusions and Treasury Minute response on Auditing Clinical Care in Scotland, and nearest corresponding passages in this report.

SCOTLAND		ENGLAND
Committee of Public Accounts' recommendations on Auditing Clinical Care in Scotland (51st Report, Session 1993-94, 2 November 1994)	**Treasury Minute response (Cm 2754, 9 February 1995)**	**Nearest corresponding passage in this report**
We recognise that an advantage of carrying out clinical audit on a voluntary basis is that participation ... is more likely to be willing and therefore more effective. However we are disappointed that there are not more health care professionals participating in the clinical audit.	The Scottish Office Home and Health Department (the Department) consider that the extent of staff participation in audit activity is reasonable given that medical audit was introduced only in 1989, that it was not extended to other professions until later and that it takes time for audit to spread from the enthusiasts to the critical mass. The numbers involved are constantly increasing; for example, over 10,000 nurses have enrolled on the Moving to Audit distance learning programme since its launch in March 1994.	The Executive intend that clinical audit should become part of routine practice for all health care professionals. Research commissioned by the Executive indicates that during 1993, 83 per cent of hospital or community health consultants attended most or all clinical audit meetings in their specialties and that in 1993-94 86 per cent of general practices were participating in some form of clinical audit (paragraphs 2.1, 2.14 to 2.20).
If the Department are serious in this endeavour we consider that they should set targets and timescales for involvement of all health professionals in the process.	The Department consider that emphasis should be on ensuring that each clinical service is underpinned by a programme of audit involving the health professionals working in that service. The Department plan to ensure through the Area Clinical Audit Committees and NHS Trust Audit Committees that within the three years (1995 to 1997) all NHS Trusts should have in place a rolling programme of audit in each of their clinical directorates.	The Executive intend that clinical audit should become part of routine practice for all health care professionals (paragraph 2.1). In England, the major responsibility for further development now rests with local purchasers and providers of health care, supported by the Executive (paragraphs 4.1 to 4.5). From 1996, the regional offices of the NHS Executive will ensure that appropriate monitoring mechanisms are in place to judge progress against the objectives of the clinical audit policy (paragraph 4.5).
While recognising that what should constitute regular and systematic audit will vary... we believe that it would assist both purchasers and providers of health care to be given guidance by the Department on the main factors to be considered in determining these important elements in clinical audit and we recommend that the Department should give further consideration to this.	The Department accept the Committee's conclusion. They say that regular and systematic audit has been refined as a concept from the 1989 Scottish Working Paper on Audit through the Thompson Report, "The Interface Between Audit and Management". As indicated in the responses to conclusions (i) and (ii) they say that the emphasis is now on audit activity being an integral part of day-to-day practice with information required for audit being derived from normal recording processes.	The Executive see clinical audit as being an integral part of clinical practice (paragraphs 2.1 and 3.31). Continued .....

Committee of Public Accounts' principal conclusions and Treasury Minute response on Auditing Clinical Care in Scotland, and nearest corresponding passages in this report (cont.)

SCOTLAND		ENGLAND
Committee of Public Accounts' recommendations on Auditing Clinical Care in Scotland (51st Report, Session 1993-94, 2 November 1994)	**Treasury Minute response (Cm 2754, 9 February 1995)**	**Nearest corresponding passage in this report**
	Guidance about this change in emphasis has been issued recently to Chairmen of area clinical audit committees and a National Clinical Audit Strategy aimed at updating and developing existing guidance on audit will be issued in draft for comment in 1995.	
We note the steps which the Department have taken to disseminate examples of good practice in this area; and that they consider they could do more with the results emerging from local and national clinical audits. We look to the Department to progress this work on a systematic basis.	The Department accept the Committee's recommendation. Dissemination is seen as an essential part of the primary objective of implementation of improved practice. They say that ways are being developed of identifying good quality completed audits which might be replicated elsewhere with advantage. A new Audit Resource Centre has been established, one of whose tasks will be to assist the process of dissemination of information, and a computerised data base with details of over 2,600 audit projects was issued on computer disk in November 1994. They intend to revise and update this register twice a year.	In February 1995, the Executive appointed a consortium to set up and run a national clinical audit centre which, they intend, will act as a focal point for dissemination of good practice which has been identified locally (paragraph 4.7).
The overall cost of clinical audit is likely to be much greater once the time of health professionals, particularly doctors, is included. We note that the Department estimate that this could amount to around 10 per cent of the time of doctors who are leading clinical audit.	The Department agree but consider that although 10 per cent might be reasonable for those leading audit, other clinicians who are undertaking audit as part of their everyday clinical practice could spend considerably less time on audit. They believe that the introduction of audit support staff and better methods of information handling should reduce this time commitment.	The Executive estimate that on average hospital doctors spend half a day per month undertaking clinical audit activities (paragraph 3.31).
We look to the Department to consider ways in which they can obtain a more reliable estimate of the overall cost of clinical audit, for example through appropriate sampling techniques.	The Department are considering how far it is possible to establish the full costs of clinical audit. One of the objectives of their Audit Resource Centre is to develop methodologies for evaluating the economic costs and benefits (financial and qualitative) of both the inputs and outputs of the audit process.	This report recommends that the Executive consider commissioning research to devise a practical cost-effective methodology to collect data that will enable purchasers and providers of health care to assess the costs of auditing clinical care and the resulting benefits to patients (summary and conclusions, paragraph 19).

Continued .....

Committee of Public Accounts' principal conclusions and Treasury Minute response on Auditing Clinical Care in Scotland, and nearest corresponding passages in this report (cont.)

SCOTLAND		ENGLAND
Committee of Public Accounts' recommendations on Auditing Clinical Care in Scotland (51st Report, Session 1993-94, 2 November 1994)	**Treasury Minute response (Cm 2754, 9 February 1995)**	**Nearest corresponding passage in this report**
We urge the Department to undertake a cost benefit analysis of the clinical audit initiative.	The Department accept the Committee's recommendation.	
We welcome the Department's intention to assemble a national database of what has changed as a result of clinical audit.	The Department believe that considerable benefits have been produced by the audit initiative. Part of the remit of their Audit Resource Centre is to maintain not just a list of projects but also the results of audit both in relation to improvements in patient care and value for money improvements.	The Executive intend that a national clinical audit centre which they have set up will act as a focal point for the dissemination of good practice; and provide a national database of successful clinical audit projects (paragraph 4.7).
We also look to the Department to monitor the use purchasers are making of clinical audit to ensure appropriate standards of patient care in contracts are met.	The Department accept the Committee's recommendation. They will discuss with purchasers the use made of clinical audit to ensure appropriate standards in patient care are met.	As part of their general move towards devolution of responsibility for routine business, the Executive have issued guidance which indicates that the detailed monitoring of clinical audit is now a matter for individual purchasers and providers of health care. The Executive intend that their regional offices will, as part of the routine performance management of health authorities, have a monitoring role in relation to clinical audit to ensure that the objectives of clinical audit are met. The Executive propose from time to time to carry out sample surveys of local monitoring information in order to assure themselves that clinical audit continues to develop in accordance with their aims (paragraphs 4.4 and 4.5). This report recommends that the NHS Executive should ensure that monitoring data used by health authorities and hospital and community trusts are collected in a sufficiently consistent form to enable the Executive to draw on those data as required, on a representative sample basis, to assure themselves that health care providers are carrying out effective audit (paragraph 19).
We note that there is concern among some clinicians that the separation of purchasers and providers might inhibit the further development of clinical audit and that the Department are looking to clinical audit committees to ensure that this does not take place. We look to the Department to monitor this closely.	The Department consider that the introduction of purchasing, and the important role that purchasers have to play in ensuring that the services delivered throughout the contracting process are subject to appropriate quality controls, will ensure that clinical audit remains firmly on the agenda. The Department will monitor the position through area clinical audit committees' annual reports and the annual meeting between the secretariat of the Clinical Resource and Audit Group and members of area clinical audit committees and Board officers mentioned above.	

Appendix 3

Methodology and sites visited

Methodology

During the course of the examination the National Audit Office visited three, from the then 14, regional health authorities in England. The regions visited were chosen in consultation with the NHS Executive and were from the North of England, the Midlands and the South to provide a broad geographical basis for the gathering of evidence.

Within these regions a number of district health authorities, family health services authorities, NHS trusts and general practices were visited. Visits within regions were planned in consultation with regional clinical audit coordinators. Sites were selected to take account of different approaches to the implementation of clinical audit and different circumstances in teaching and non-teaching hospitals and urban and rural locations.

Evidence was gathered from interviews with medical, nursing and other health professionals involved in clinical audit, and with managers of units and their purchasing authorities. Medical and nursing royal colleges, and bodies with specific knowledge of clinical audit, were consulted; and officials of the NHS Executive were interviewed. Information was also obtained from published annual clinical audit reports of health authorities and NHS trusts, and published studies of and reports on clinical audit.

Sites visited and organisations consulted by the National Audit Office

Northern Regional Health Authority:

Hospital and Community Health Services

Newcastle City Health NHS Trust, Newcastle Upon Tyne
Newcastle Health Authority
North Cumbria Health Authority
North Tees Health Authority
North Tees Health NHS Trust, Stockton on Tees
West Cumbria Health Care NHS Trust, Whitehaven

Family Health Service Authorities

Durham Family Health Services Authority
South Tyneside Family Health Services Authority

South East Thames Regional Health Authority:

Hospital and Community Health Services

Brighton Health Care NHS Trust, Brighton
East Sussex Health Authority
Guy's Hospital, Guy's and St Thomas' Hospital Trust, London
South East London Health Authority

Family Health Services Authority

Bromley Family Health Services Authority

Trent Regional Health Authority:

Hospital and Community Health Services

Doncaster Royal Infirmary and Montagu Hospital NHS Trust, Doncaster
Leicester Health Authority
Leicester Royal Infirmary NHS Trust, Leicester
Northern General NHS Trust, Sheffield
Sheffield Health Authority

Family Health Services Authorities

Derby Family Health Services Authority
Lincoln Family Health Services Authority
Nottingham Family Health Services Authority

Royal Colleges

Royal College of Anaesthetists
Royal College of General Practitioners
Royal College of Midwives
Royal College of Nursing
Royal College of Obstetricians and Gynaecologists
Royal College of Physicians
Royal College of Psychiatrists
Royal College of Radiologists
Royal College of Surgeons of England

Other organisations

CASPE Research
Eli Lilley National Clinical Audit Centre, Department of General Practice, University of Leicester
The Institute of Nursing at the University of Leeds

Glossary

angina:	pain in the chest usually associated with disease of the coronary arteries
CASPE Research:	a research organisation commissioned by the NHS Executive to undertake an evaluation of clinical audit in the hospital and community health services in England
clinical audit:	a generic term which embraces the audit activities undertaken by all health care professionals including doctors, nurses, and professions allied to medicine (such as therapists), whether in their own professional groups or as a clinical team
clinical audit coordinator:	a person employed to provide an educational, information and support service to health professionals undertaking, or planning to undertake, clinical audit
clinical guidelines:	systematically developed statements which assist in decision making about appropriate health care for specific clinical conditions
family health services authority:	family health services authorities are responsible for managing NHS services provided by general practitioners, dentists, community pharmacists and ophthalmic opticians
health care professional:	a professionally qualified health service worker. For example, a doctor, dentist, pharmacist, nurse, physiotherapist, or speech therapist
medical audit:	a systematic, critical analysis of the quality of medical care, including the procedures used for diagnosis and treatment, the use of resources, and the resulting outcome and quality of life for the patient
medical audit advisory group:	a group, within each family health services authority, which advises on and encourages peer review and has the remit of ensuring that all general practices do some form of medical audit
medical audit committees:	groups, within each district health authority and NHS trust, who oversee the implementation of medical audit by hospital doctors. Medical audit committees are chaired by senior clinicians

outcome:	alteration in the health status of the patient directly attributable to clinical action or inaction
pressure sore:	(sometimes called bedsore) an area of inflamed skin, tending to ulcerate, which appears on the body or limbs, especially those areas with not much fat between bones and skin. If untreated will ulcerate and, in extreme cases, can be life threatening
primary health care:	is normally the first level of contact between the patient and the National Health Service and centres on services provided by general practitioners
purchaser:	a health authority or fundholding general practitioner buying services on behalf of patients from a provider under contract
standard:	specification of process and/or outcome against which performance can be measured

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