THE 2001 REPORT OF THE NATIONAL CONFIDENTIAL ENQUIRY INTO PERIOPERATIVE DEATHS

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ADDITIONAL INFORMATION

This report is available for downloading from the NCEPOD Web site at www.ncepod.org.uk

Copies can also be purchased from the NCEPOD office.

The analysis of data from anaesthetic and surgical questionnaires is not included in full in this report. A supplement containing additional data is available free of charge from the NCEPOD office, as are copies of the questionnaires.

CONTENTS

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- The Advisors whose names are listed overleaf.

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FOREWORD

This latest report provides a stark comparison of the changing medical scene over the past decade. It demonstrates that patients being subjected to emergency surgery are both older and sicker than they were ten years ago. In turn, this has a profound impact on the service provision necessary to deal with these clinical problems.

NCEPOD has repeatedly emphasised the need for both Intensive Care and High Dependency facilities to deal satisfactorily with many of the surgical problems of severely ill patients. In 'Extremes of Age'[1] we pointed out the best practice of providing multidisciplinary critical care teams to deal successfully with both the preoperative resuscitation and postoperative care of the elderly surgical emergency. This report not only re-emphasises that point, but also exposes a wider issue of providing an enlarged cadre of both doctors and nurses capable of dealing with the increased demand for management of the severely ill.

It is not only at the ICU/HDU level that provision is needed, but equally on the general wards since these patients will spend but a short time within the higher dependency facilities before being relocated to the main ward areas. The nationwide lack of nurses has had a long term effect on the recruitment of staff trained, particularly in ICU/HDU skills, with patients needing higher levels of care generally on the one hand, or day stay facilities on the other. The net consequence for most wards is a deficiency in the nursing staff complement to look after these increasingly aged and sick patients. Unfortunately, there is an inevitable disincentive to recruitment of staff to overly busy wards.

Critical care courses developed by the Royal Colleges are over-subscribed with a lack of resources, both human and fiscal, to provide sufficient training programmes to satisfy demand. This swing in the pattern of disease over the last ten years must call into question the balance of bed distribution and the associated staffing, when so frequently higher dependency facilities are needed to provide a successful outcome to surgical interventions. This is further illustrated in the section on management of malignancy, where the volume of emergency admissions is outstripping the Calman-Hine recommendations due to the inadequacy of resources on the ground.

The recent Shipman enquiry demonstrated problems with medical records. There is good evidence in this report to suggest that medical record keeping is falling below acceptable standards, an example being that a third of the patients undergoing laparotomy for non-malignant disease did not apparently have any operation note to accompany the procedure. NCEPOD has been concerned, not only about the apparent paucity of good record keeping, but also about communications generally. Instances where communication failures within surgical and anaesthetic teams have led to inappropriate actions are exposed, as are failures of communication between primary and secondary care practitioners. NCEPOD has long sought means whereby the deaths of patients in the community following discharge after surgery could be recorded. The HES data does not provide a sufficiently robust method for such analysis and there is, therefore, a continuing need for communication and record keeping at all levels to be improved. It is fundamentally a clinical governance issue and should be addressed

accordingly. Unfortunately, poor record keeping will inevitably lead to poor completion of NCEPOD questionnaires, which must call into question the validity of some of the data in the Enquiry.

Finally, the continuing low level of postmortem examination rates has to be mentioned, particularly in the light of both the Bristol Royal Infirmary[2] and Royal Liverpool Children's Hospital[3] enquiries. The need for an analysis of patients who should have had such an examination but did not, must form part of a future NCEPOD enquiry.

We are all well aware of the clinical standards which should be achieved, but this report does provide a salutory reminder that achieving those goals demands much greater awareness of the issues at hand and a desire to satisfy the Quality Agenda set out in the NHS Plan.

John Ll Williams
Chairman

INTRODUCTION

NCEPOD has been publishing reports for over eleven years, during which time the emphasis has changed. The perspective of the main report has always been viewed from the position of a patient's death; that, after all, is the basis of our protocol. The main thread that has run through all the reports is perhaps best summed up by Professor Blandy's words in the foreword to a previous report[4] *"Modern surgery and anaesthesia are so safe that when an operation is followed by death, the reason is nearly always because the underlying condition is fatal. The purpose of The National Confidential Enquiry into Perioperative Deaths is to identify remediable factors in anaesthesia and surgery, such as the provision of better facilities or different skills. The enquiry calls for the active co-operation and effort of busy surgeons, anaesthetists and gynaecologists"*. Whereas initially the tone of the reports was very critical of anaesthetists and surgeons, this has now changed and the focus is much more on the resourcing, provision and management of services. Sadly, many issues re-occur and, in particular, inappropriate surgery still remains a concern. Whilst clinicians have changed their practice in the light of the findings of this and other enquiries, provision within our health services has often lagged behind. Of course errors will not disappear and it is inevitable that incidents will happen, some of which will result in death. Often these incidents are the result of errors in system management, inadequate facilities, the pressure of the workload and the need to meet impossible targets. There are examples of all these situations throughout this report.

The report contains several specific sections, which are focused on the following issues: the quality of our data, the management of patients with malignant disease, the role and provision of critical care services, the influence of variations in quality of care on the causation of death and the difficulties faced by NCEPOD as a result of poor hospital information systems. There is also a section on pathology. NCEPOD considers the postmortem examination to be of great value in assisting both the clinician to arrive at an understanding of the cause of death, and the relatives to come to terms with their loss. The role and quality of postmortem examinations is considered in some depth.

There are several interlinked issues concerning the quality of our data. We need to be assured that the data is accurate and that the returns faithfully reflect the contents of the notes and the clinical events. To investigate this, we conducted a limited data quality audit at selected hospitals. There is also a section on the general methodology of NCEPOD and the collection of data. Both these sections raise questions about the impact of medical records systems on clinical care. Our audit suggests that some clinicians are not doing what is expected of them in terms of returning accurate data. This behaviour could result in questions being raised about the validity of our conclusions and recommendations and we would urge these clinicians to be more diligent when returning data. The organisation of medical records and the recording of information within them are one of the building blocks of our medical system. There is clear evidence that the clinicians' job (and ability to comply with an increasing demand for audit data) is being made more difficult by the poor organisation of medical records, difficulties with the retrieval of

information and the lack of nationally compatible record systems. Problems with medical records have a considerable impact on clinical care and education. Information may well be recorded but, if this information about patient care is not readily accessible, clinicians will experience time consuming difficulties in the retrieval and application of the information.

Recent years have seen the introduction of proposals for the organisation and provision of services for patients suffering with malignancy. We have analysed answers to specific questions concerning the management of such patients. In the year of the study (1999-2000) there appeared to be a lack of uniformity of provision of care.

Critical care services are pivotal to the survival of many patients with life-threatening illnesses and the influence of the availability (or otherwise) of these services is again explored in this year's report. Despite assurances to the contrary, there remains concern amongst clinicians that there is still a deficiency in the provision of critical care services[5, 6].

The causes underlying the death of a patient following anaesthesia and surgery are multifactorial. The past few years have been marked by frenzied criticism of medical professionals and an intense focus on adverse events. These criticisms, whether from the media, politicians, health service managers or fellow clinicians, have often implied that there was wilful negligence by clinicians. But the practice of medicine (with anaesthesia and surgery particularly in mind) is not an exact science, it involves humans and humans err[7]. There needs to be an acceptance that doctors and nurses are not infallible and that they do make mistakes. We have attempted to tease out the various factors that contribute to managing a successful outcome for the patient. When things go wrong it is then possible to ask the question 'Who is to blame?' However this question is based on a culture which we should be leaving behind. The answer will rarely be simple and is likely to be multifactorial. Given the focus on doctors and their mistakes referred to above, clinicians should find this reassuring.

An adverse event may be defined as 'an unintended injury or complication which results in disability, death or prolongation of hospital stay, and is caused by health care management rather than the patient's disease[8]. From our viewpoint, there will be few deaths that fall into this definition. A recently published study from two London hospitals has also shown a low incidence of death after an adverse event[9]. However, there are a few cases where we feel that care falls below accepted practice i.e. below a 'current level of expected performance for the average practitioner or system that manages the condition in question[7]. The key words here are 'unintended' and 'system'. It must be remembered that clinicians do not set out to deliberately do harm and that the primary disease process and comorbidities are often too severe and advanced to allow for a successful outcome. Similarly, if the system within which the clinician works is defective then adverse events are inevitable. We believe that NCEPOD, supported by clinicians, has an established credibility and that the lessons learnt from the analysis of perioperative deaths should be applied to help prevent future incidents. Part of the remedy is in changing systems of practice and creating safeguards wherever possible. The remedy is in design[10, 11, 12]. The comprehensive application of recommendations emanating from NCEPOD publications over the years would contribute greatly to preventing errors of management due to failure to follow accepted practice, whether this is at an individual or system/organisational level.

Rather than asking 'Who is to blame?' we should focus on the remedial actions needed to produce a major improvement in the quality of care and ask 'Whose problem is it?' The reader may find pointers to the answer within this report.

Ron Hoile and Stuart Ingram
Principal Clinical Coordinators

PRINCIPAL RECOMMENDATIONS 2001

- Surgeons and anaesthetists should partake in **multidisciplinary audit,** specialists meeting together to discuss improvements in care. These meetings should concentrate less on asking 'Who is to blame?' and more on changing systems of practice to safeguard patients wherever possible (page 61).

- All Trusts in the NHS should use **information systems** with a nationally agreed specification. This should apply to case notes, patient information systems etc. Such uniform systems would facilitate the retrieval of standardised information and ease the introduction of the Electronic Patient Record (page 23).

- There is a gap in the levels of medical and nursing expertise between ICU/HDU services and ward based care. In particular, there is a need to increase the skills of nurses and doctors on the wards in **central venous**

pressure (CVP) management and interpretation. This deficiency should be addressed. There ought to be sufficient ward equipment with transducer pressure monitoring facilities to allow accurate and continuous CVP monitoring. More national and local training programmes are required to provide education in the appropriate skills required to apply these techniques in ward areas (page 75).

- The service provision for **cancer patients**, presenting either as an emergency or urgently, requires review. The current system is failing patients, despite the best efforts of clinical staff. Most patients with cancer who die within 30 days of an operation are admitted as an emergency or urgently and many are not referred either to a surgeon with a sub-specialised oncology interest, a multidisciplinary team, medical oncologist or specialist cancer nurse when it is indicated. Clinical networks and local guidelines should be constructed in order to ensure that all patients with cancer receive an early and appropriate referral to specialists (page 112).

- **Clinicians, pathologists and coroners** should review their working relations and means of communication. The aim must be to improve the quality and timeliness of information provided, in order to inform the understanding of events surrounding a perioperative death (page 121).

- There needs to be an education programme to re-establish public confidence in pathology services and the **postmortem examination** as a vital tool with which to investigate a postoperative death (page 121).