Avoiding Errors in Adult Medicine

Ian P. Reckless, D. John M. Reynolds, Sally Newman, Joseph E. Raine, Kate Williams & Jonathan Bonser

CLINICAL CASES

EXPERT OPINION

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Ian P. Reckless
BSc, MRCP, MBA
Consultant Physician and Assistant Medical Director
Oxford University Hospitals NHS Trust
Oxford, UK

D. John M. Reynolds
DPhil, FRCP
Consultant Physician and Clinical Pharmacologist
Oxford University Hospitals NHS Trust
Oxford, UK

Sally Newman
BSc, LLM
Solicitor, Head of Legal Services
Oxford University Hospitals NHS Trust
Oxford, UK

Joseph E. Raine
MD, FRCPCH, DCH
Consultant Paediatrician
Whittington Hospital
London, UK

Kate Williams
MA (Oxon)
Partner
Radcliffes LeBrasseur Solicitors
Leeds, UK

Jonathan Bonser
BA (Oxon)
Consultant in the Healthcare Department of
Fishburns LLP, Solicitors
London, UK
Former Head of the Claims and Legal Services
Department of the Leeds office of the Medical Protection Society

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The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK
111 River Street, Hoboken, NJ 07030-5774, USA

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Contributors

Joanne Haswell

Barrister
Director, InPractice Training
London
Part 3: The role of hospital staff, External investigators, Hospital investigations, The role of the doctor

Alistair Hewitt

Partner, Radcliffes LeBrasseur
Leeds
Part 3: Coroner's court, Criminal matters

Kate Hill

Solicitor, Radcliffes LeBrasseur
Managing Director, InPractice Training
London
Part 3: The role of hospital staff, External investigators, Hospital investigations, The role of the doctor

Preface

Medical errors in their broadest sense represent a major problem for modern society. It has been estimated that approximately 1 in 10 patients admitted to hospital in the developed world is the victim of an error, and approximately 1 in 300 patients admitted to hospital dies as a result of such an error.

Healthcare professionals tend to act in good faith and medical error has many victims – patients, families, those very medical professionals (and their families)…

The spheres of law and medicine overlap increasingly often: human rights; corporate responsibility; NHS standards; rising patient expectations; increasingly complex and ethically challenging interventions; clinical negligence and medical error; and, a compensation culture all collectively create a large amount of work at the medico-legal interface. Physicians and lawyers have each created a language, impenetrable from the outside, with which to conduct their trade – many relatively simple concepts can be lost in translation.

This book aims to help doctors to understand the legal language and concepts, to avoid the major medico-legal traps, and to act promptly and responsibly when errors occur or legal difficulties arise. We hope we have avoided using impenetrable jargon and have been able to present the information in a way that is accessible to all.

The contents of this book inevitably draw on the experience of the authors but by and large, the cases are not directly factual accounts. Where cases do bear relation to real patient stories, any details have been changed sufficiently to fully protect the identities of all involved,

other than in the rare case where the information is already firmly within the public domain.

Ian Reckless
D John M Reynolds
Sally Newman

Abbreviations

ACA	Anterior Cerebral Artery
AF	Atrial Fibrillation
AMU	Acute Medical Unit
BNF	British National Formulary
BP	Blood Pressure
CEMD	Confidential Enquiry into Maternal Death
CNS	Central Nervous System
CNST	Clinical Negligence Scheme for Trusts
CO2	Carbon Dioxide
COPD	Chronic Obstructive Pulmonary Disease
CPR	Cardiopulmonary Resuscitation
CQC	Care Quality Commission
CRP	C-Reactive Protein
CSF	Cerebrospinal Fluid
CT	Computed Tomography
CT1	Core Trainee (year 1)
CT2	Core Trainee (year 2)
CTPA	Computed Tomography Pulmonary Angiogram
DNAR	Do Not Attempt Resuscitation
DVLA	Driver and Vehicle Licensing Authority
ECHR	European Convention on Human Rights
ECG	Electrocardiogram
ED	Emergency Department
EMG	Electromyogram
EPA	Enduring Power of Attorney
FY1	Foundation Trainee (year 1)
FY2	Foundation Trainee (year 2)
GMC	General Medical Council
GP	General Practitioner
HSV	Herpes Simplex Virus
ICAS	Independent Complaints Advocacy Service
IMCA	Independent Mental Capacity Advocate

ISQ	In Status Quo
ITU	Intensive Therapy Unit
IVF	In Vitro Fertilisation
IVIG	Intravenous Immunoglobulin
JVP	Jugular Venous Pressure
KPa	Kilopascal
LBBB	Left Bundle Branch Block
LPA	Lasting power of Attorney
LFTs	Liver Function Tests
M&M	Morbidity and Mortality
MCA	Middle Cerebral Artery
MCA	Mental Capacity Act 2005
MDT	Multidisciplinary Team
MRI	Magnetic Resonance Imaging
MRSA	Methicillin Resistant Staphylococcus Aureus
NHS	National Health Service
NHSLA	National Health Service Litigation Authority
NICE	National Institute for Health and Care Excellence
NICE	National Institute for Health and Clinical Excellence
OGD	Oesophagogastroduodenoscopy
PaO2	Partial pressure of oxygen in arterial blood
PCR	Polymerase Chain Reaction
PCT	Primary Care Trust
PHSO	Parliamentary and Health Service Ombudsman
SHA	Strategic Health Authority
SHO	Senior House Officer
SIRI	Serious Incident Requiring Investigation
SOB	Shortness of Breath
SpR	Specialist Registrar
ST5	Specialty Registrar, year 5
TFTs	Thyroid Function Tests
TIA	Transient Ischaemic Attack
TOE	Transoesophageal echocardiogram
UTI	Urinary Tract Infection
VP	Ventriculo-peritoneal
VTE	Venous Thromboembolism

Introduction

In 2000, a committee established by the Department of Health, chaired by the then Chief Medical Officer, Professor Sir Liam Donaldson, published its report *An Organisation with a Memory*. The report recognized that the vast majority of NHS care was of a very high clinical standard and that serious failures were uncommon given the volume of care provided. However, when failures do occur their consequences can be devastating for individual patients and their families. The healthcare workers feel guilt and distress. Like a ripple effect, the errors also undermine the public's confidence in the health service. Last, but not least, these adverse events have a huge cumulative financial effect. Updating the figures provided in the report, in 2010/11, the NHS Litigation Authority (NHSLA, the Special Health Authority body that manages clinical negligence claims against NHS Trusts in England) paid out nearly £863 400 000 for clinical negligence claims (these figures take no account of the costs incurred by claimant and defendant solicitors). The report commented ruefully that often these failures have a familiar ring to them; many could be avoided 'if only the lessons of experience were properly learned'.

The committee writing the report also noted that there is a vast reservoir of clinical data from negligence claims that remains untapped. They were gently critical of the health service as being par excellence a passive learning organization; like a school teacher writing an end-of-term report, they classified the NHS a poor learner – could do better. On a more positive note, the report stated that 'There is significant potential to extract valuable learning by focusing, specialty by specialty, on the main areas of practice that have resulted in litigation.' It acknowledged

that learning from adverse clinical events is a key component of clinical governance and is an important component in delivering the government's patient safety and quality agenda for the NHS.

The NHSLA has reported that its present (as of 2011) estimate for all potential liabilities, existing and expected claims, is £16.8 billion. At the time *An Organisation with a Memory* was written, this figure stood at £2.4 billion. (These sums are actuarially calculated figures that are based on both known and as yet unknown claims, some of which may not arise for many years to come. This amount should not be confused with the figure of £863 400 000 mentioned above, which was the sum actually paid out in damages in one calendar year). The NHSLA also reported that the number of clinical negligence claims rose from 6652 in 2009/10 to 8655 in 2010/11 While this may be due to the increased readiness of patients to pursue clinical negligence claims rather than any marked decline in the quality of care provided by the NHS, the statistics clearly show that there is still room for improvement in the care provided to patients. It is this gap in the quality of care that we, the authors, wish to address through this book.

An Organisation with a Memory as a report tried to take a fresh look at the nature of adverse events within the NHS. It looked at fields of activity outside healthcare, such as the airline industry. The committee commented that there were two ways of viewing human error: the person-centred approach and the systems approach. The person-centred approach focuses on the individual, his inattention, forgetfulness and carelessness. Its correctives are aimed at individuals and propagate a blame culture. The systems approach, on the other hand, takes a holistic view of the reasons for failure. It recognizes that many of the problems facing large organizations are complex and result from the interplay of many factors: adverse events often arise from

the cumulative effect of a number of small errors; they cannot always be pinned on one blameworthy individual. This approach starts from the position that humans do make mistakes and that errors are inevitable, but tries to change the environment in which people work, so that fewer errors will be made.

The systems approach does not, however, absolve individuals of their responsibilities. Rather, it suggests that we should not automatically assume that we should look for an individual to blame for an adverse outcome. The authors of *An Organisation with a Memory* acknowledged that clinical practice did differ from many hi-tech industries. The airline industry, for example, can place a number of hi-tech safeguards between danger and harm. This is often not possible in many fields of clinical practice, where the human elements are often the last and the most important defences. 'In surgery,' they wrote, 'very little lies between the scalpel and some untargeted nerve or blood vessel other than the skill and training of the surgeon.' In addition, healthcare provision is inherently more risky than many hi-tech industries. An airline will suspend flights if conditions are dangerous – physiologically unstable patients cannot always have their treatment suspended simply because they are very sick. Risk-benefit margins are very different in medicine than in aviation. A patient with cancer will inevitably be made to feel ill with aggressive chemotherapy, and they run substantial risks of marrow suppression and other serious adverse effects. The rationale for embarking on high risk treatment is that if untreated the underlying disease is even higher risk. The challenge is to be able to anticipate problems and minimize their impact. We believe that these differences are key to understanding the nature of error in healthcare and they are the reasons why we have placed such great emphasis on case studies that show how doctors make errors in treating their patients.

The committee felt that the NHS had for too long taken a person-centred approach to the errors made by its employees and that this had stifled improvement. They called for a change in the culture of the NHS and a move away from what they saw as its blame culture. More than a decade has passed since the writing of the report and whilst there has been some change in attitudes, more progress is required. We want to see an NHS that promotes a safety culture, rather than a blame culture, a culture where there are multiple safeguards built into the systems of healthcare provision.

However, the legal systems (civil, criminal and coronial) in which the medical services operate do not always foster such an approach. Although coroners can now comment on the strengths and weaknesses of systems in their verdicts, in general, the civil litigation process still tends to focus on the actions of individuals rather than the failings of the healthcare system. Perhaps the most glaring example of this person-centred approach can be seen in the way the General Medical Council treats medical practitioners, when they are notified of concerns about an individual doctor's practice. In that regulatory forum, doctors are expected to meet personal professional standards and will be held to account if they fall short of them in any way. Yet they may find themselves working in an environment that at times seems to conflict with those professional standards.

In Reason (2000), Professor James Reason (originator of the well known ‘Swiss Cheese’ explanation of how errors sometimes lead to damage) stated:

> The longstanding and widespread tradition of the person approach focuses on the unsafe acts – errors and procedural violations – of people at the sharp end: nurses, physicians, surgeons, anaesthetists, pharmacists, and the like. It views these unsafe acts as arising primarily from aberrant mental processes such as forgetfulness,

inattention, poor motivation, carelessness, negligence, and recklessness. Naturally enough, the associated countermeasures are directed mainly at reducing unwanted variability in human behaviour. These methods include poster campaigns that appeal to people's sense of fear, writing another procedure (or adding to existing ones), disciplinary measures, threat of litigation, retraining, naming, blaming, and shaming. Followers of this approach tend to treat errors as moral issues, assuming that bad things happen to bad people – what psychologists have called the just world hypothesis.

The basic premise in the system approach is that humans are fallible and errors are to be expected, even in the best organisations. Errors are seen as consequences rather than causes, having their origins not so much in the perversity of human nature as in 'upstream' systemic factors. These include recurrent error traps in the workplace and the organisational processes that give rise to them. Countermeasures are based on the assumption that though we cannot change the human condition, we can change the conditions under which humans work. A central idea is that of system defences. All hazardous technologies possess barriers and safeguards. When an adverse event occurs, the important issue is not who blundered, but how and why the defences failed. (Reproduced from J. Reason (2000) Human error: models and management, *BMJ* 320:768, with permission from BMJ Publishing Group Ltd.)

As authors, we believe that the committee of *An Organisation with a Memory* were correct, when they wrote that many useful lessons can be learnt from the bitter experience of errors and litigation and that this can best be done by looking specialty by specialty at those areas of medical practice where errors are most frequently made. Thus, we have produced a book looking at errors in adult

medicine. It is one of a series of such books, each concentrating on a separate specialty.

If doctors are to learn lessons from their errors and litigation, then they must have some understanding of the underlying processes. Thus, in Part 1, Section 1: Errors and their causes, we discuss types of medical error, the key legal concepts and how they interact with medical practice. In Part 1, Section 2: Medico-legal aspects, we cover the basic legal concepts relevant to medical care: negligence, consent and confidentiality.

The heart of the book is Part 2. Here, we set out a number of case studies on common errors in adult medicine. Each case has its roots in everyday practice and is supplemented with medical and legal comment. Many cases concern failures to diagnose an illness, the commonest source of error in medical treatment.

Finally, Part 3 provides a practical guide to the various forms of concerns that a doctor may encounter, how they may affect him and what he can do to protect his interests.

Our aim is to provide a book that will go some way to meet the challenges laid down at the turn of the millennium in *An Organisation with a Memory*. We hope that it will reduce the number of clinical errors and improve the standard of care provided by individual physicians and hospitals throughout the country.

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PART 1

Section 1: Errors and their causes

A few words about error

If our aim is to reduce the number of clinical errors, then we must explain what we mean by ‘error’. The Oxford English Dictionary defines ‘an error’ as a mistake. This is self-evident and does not really help us, the authors, to define our goal.

We could define our aim by looking at the end-result of errors and say that we want to prevent poor patient outcomes. That must be our primary concern, but our aim is broader; many errors can be rectified before any serious harm is done.

We could look at the seriousness of the error, how ‘bad’ the error actually was. Some errors and their consequences could be so serious that they can be labelled ‘criminal’ and in fact some cases which fall far short of acceptable standards of practice are investigated by the police and are brought before the criminal courts by the Crown Prosecution Service, as we shall see later. Other errors are the sort that only become obvious with the benefit of hindsight and could be made by anyone, even the best of doctors. In short, we want to look at all errors across the spectrum. What we hope to achieve is to raise the standard of care provided to patients, so that errors of all kinds are reduced.

Learning from system failures – the vincristine example

The way that the civil courts look at negligence is to focus on the acts of individuals and to ascribe fault to particular actions or omissions of doctors, if their treatment of the patient fell below the standard of the *Bolam* test (see Part 1, Section 2, below). But as mentioned in our Introduction, there is another way of looking at errors and that is to consider system failures.

In order to illustrate the difference between system failures and individual fault, the authors of *An Organisation with a Memory* examined a case concerning the maladministration of the drug vincristine. The case concerns a child but the key learning points are equally applicable to general adult medicine. The mistake cost the patient his life. A number of shortcomings occurred during the patient's stay in the hospital. We believe that it would be useful to set out what happened in the lead up to the patient's death, pointing out at each stage, the failings that occurred. We will then provide a more detailed discussion of the general lessons that can be learnt from the case.

The following is taken with minor amendment from *An Organisation with a Memory.* It is a classic example of how a number of small errors can add up to a massive error and end with a fatality:

> A patient was being treated in a district general hospital (DGH). He was due to receive chemotherapy under a general anaesthetic at a specialist centre. He should have been fasted for 6 hours prior to the anaesthetic, but was allowed to eat and drink before leaving the DGH.
>
> *Fasting error. Poor communication between the DGH and the specialist centre.*
>
> When he arrived at the specialist centre, there were no beds available on the oncology ward, so he was admitted to a mixed-specialty ‘outlier’ ward.