ERRORS, MEDICINE AND THE LAW

ALLAN MERRY AND ALEXANDER MCCALL SMITH
CAMBRIDGE UNIVERSITY PRESS, 2001

It is becoming increasingly apparent that the problem of iatrogenic harm - harm caused by health care providers - is one of the most pressing issues facing the medical and legal professions. The terrifyingly ubiquitous nature of iatrogenic harm means it is a problem that will inevitably affect each of us. Against this background, Alan Merry, a practicing anaesthetist and Alexander McCall Smith, Professor of Medical Law at the University of Edinburgh have sought to address this problem in their book *Errors, Medicine and the Law*.

Statistically, this crisis of harm whilst in medical care, is simply staggering. Drawing from studies both in the US and Australia, the authors illustrate the dimensions of this crisis. They cite, for example, an Australian study in which 'adverse events' - including death, disability, or prolonged hospital stays - occurred in 16.6 per cent of hospital admissions, over half of which were deemed 'highly preventable'. These figures, they say, would indicate more people are dying from medical negligence than dying on the roads. They do, however, stress that these statistics alone understate the complexity of the problem. Their central thesis is that although much can, should and has been done to address the problem of iatrogenic harm, medical treatment is by its very nature inherently risky and as such, error is often an inevitable consequence of complex activity.

Merry and McCall Smith's approach to the problem of iatrogenic harm is to develop a detailed, systematic taxonomy of incidents that may give rise to harm - broadly, accidents, errors and violations. Each is defined and sub-classified to give a comprehensive system of categories into which adverse events may be placed according to the circumstances giving rise to the event. This near 'codification' of the types of harm that may arise in health care is perhaps the most valuable feature of this work. Drawing upon psychology, philosophy, cognitive science and error theory the authors develop a framework into which incidents may be classified according to the circumstances giving rise to the incident. Subsequently, this classification can then assist in determining culpability in a reasoned and consistent fashion. These classifications attempt to establish a language for discourse in this area with the degree of precision that the subject demands.

Parallel to this taxonomy of error, the authors propose a hierarchy of moral fault - five levels of blame - from mere causation in fact to the intentional causing of harm. This approach seems to be an attempt to rationalise the concept of legal causation, an ambitious task given that a judicial solution to the problem of devising a consistent and reasonable conceptual basis for determining blameworthiness beyond factual causation has proved elusive. The authors argue that once factual causation has been established, the conduct of the health care provider is then analysed to establish whether it is appropriate to attribute 'blame' or 'moral fault'. This second stage, they argue, needs to draw upon the insight that cognitive science and error theory can offer. In this respect, the authors' rigorous classification of error becomes central to the attribution of blame.

The authors seek to distinguish between those errors that are skill-based and those that are knowledge based, the latter category including deliberative errors. The incidence of skill-based errors, they argue, may in fact be counter-intuitive. Whereas one would expect that the highly trained medical professional - the 'expert' - would be unlikely to make simple skill based slip-ups or omissions, the converse may actually be true. Cognitive science, they say, indicates that in highly skilled activity - complex activity that relies heavily on automatic skills - the 'expert' is actually predisposed to what they refer to as 'slip/lapse' errors, whilst being less susceptible to other forms of error. This counter-intuitiveness pervades many of the concepts in the book. For example, the distractibility that would cause a doctor to accidentally administer an incorrect dosage of drugs is the same distractibility that a doctor relies upon to identify unexpected complications in a complex procedure. Thus, it is argued, many skill-based, slip/lapse errors are inevitable illustrations of the limitations of human function in complex activity. In this respect Merry's clinical experience is evident, many examples draw upon anaesthesiology to illustrate the staggering complexity of modern health care systems and technology. Indeed, it is hard to argue with the conclusion that a drug administration error is a statistical inevitability if one understands Merry's explanation that a single anaesthetic procedure may require up to fifty drug applications and that an anaesthetist may make up to 500, 000 drug administrations in a working lifetime. In recognising these limitations, the authors propose that it is usually inappropriate to attribute blame to this kind of error, beyond simply recognising causation in fact, because the element of moral fault is absent. Quite critically, they suggest that often the culpability for these types of errors is not attributed to carelessness, but rather the severity of the consequences. They argue this 'outcomes bias' - attributing culpability on the basis of the severity of the consequences – is manifestly irrational.

The authors identify knowledge-based errors as the second major category of error, along with its major subsets. Again, drawing upon theories of cognitive processing, the authors propose that to judge errors of this kind, a different kind of evaluation needs to be undertaken than when evaluating skill-based errors by virtue of the difference in thought processes. They propose that knowledge-based errors fall into two general categories - 'rule' based errors and 'deliberative' errors. 'Rules' in this

sense, are the connection between the knowledge base and possible courses of action. In the medical context, if you see symptoms A, B and C then diagnose disease X. Thus, rule based errors may arise if the pattern of symptoms is incorrectly identified or the wrong rule applied. The authors distinguish rule-based errors from deliberative errors on the basis of the direction of cognitive processing. In the former, the reasoning is 'feed forward' - the rule is applied with a particular objective in mind, on the basis of past experience. The latter is the reverse process where the objective is sought using 'feedback' processing - a trial and error process. This kind of reasoning is by its very nature error based and time consuming, but ultimately a necessary and powerful tool. In some situations a rule will simply not be available to give guidance and deliberative reasoning must guide behaviour. Scientific method is identified as a formalised example of this category of reasoning. Merry and McCall Smith identify what is commonly called an 'error of judgment' as a subset of the deliberative error. For this kind of error, they argue, it is critical that the decision or action be evaluated against the correct standard. The outcomes of many decisions, particularly in health care, are inherently uncertain and the soundness of the decision cannot necessarily be judged on the basis of the outcome alone. Judgments of this type, they argue, need to be tested against normative rather than objective criteria.

This approach is perhaps a more controversial aspect of this work, and is undoubtedly attributable to Merry's experience as a practitioner. It endorses what is know as the *Bolam*[1] principle, a standard for medical negligence that has been applied in the UK courts, but has been widely criticised and which was rejected in the High Court of Australia in *Rogers v Whitaker*[2]. The *Bolam* principle, in effect, provides a doctor with a defence to a claim of negligence if they can show that their decision was supported by a responsible body of medical opinion. A decision, therefore, is not judged by what *should* have been done, but rather what other responsible practitioners *would* have done. The authors acknowledge that, essentially, a *Bolam*-type principle allows doctors to unilaterally set their own standard of care but they stridently assert that it would be manifestly unfair for tort law not to take into account medical custom or consensus based defences. To do so, they argue, would ignore the nature of medical practice and training, where the junior doctor assists or is supervised by the senior doctor. Perhaps, most importantly, to impose liability for conscientiously following recommended practices would be unfair. The point is passionately argued and for these authors, the conflict between the *Bolam* and *Rogers v Whitaker* principles is not simply about doctors or courts jealously asserting their right to determine the standard of care. Rather, it is representative of the competing interests of patient protection and the doctor/defendant's interest in being able to act with certainty. These conflicts, as part of the wider issue of the role and operation of tort law are also addressed.

---

1 *Bolam v Friern Barnet Hospital Management Committee* [1957] 1 WLR 582.

2 *Rogers v Whitaker* (1992) 175 CLR 479.

In the final section of the book, Merry and McCall Smith give a brief overview of the wider role of the tort law system and options for law reform. The arguments for and against the retention of fault-based tort law are detailed. This discussion is impressive for its thoughtfulness, compassion and practicality. They argue that there are many reasons, moral and practical, for the retention of fault-based torts, but temper this with a reminder that as a compensation mechanism, tort law is terribly inefficient and taxing upon scarce resources, particularly those of the health system. The need for balance between competing interests is stressed, particularly in the public system, where a judgment for a negligently injured patient means fewer resources are available to treat other patients. Similarly, the authors look at 'defensive medicine' - the practice of undertaking excessive tests and investigations in an attempt to exclude the possibility of negligence - a practice equally taxing on resources.

Options for law reform, from simple case screening to no-fault systems, such as the system operating in New Zealand, are explored. The authors, however, stress that when canvassing options for reform, one must not lose sight of the primary goal - a reduction in the incidence of adverse outcomes in medical treatment. This approach is particularly refreshing, given that recent debate between doctors and plaintiff lawyers has largely centred on the so-called 'litigation crisis' and spiralling indemnity costs. Generally, however, they argue for a less confrontational approach to dealing with the outcomes of medical harm, with the focus on blame giving way to a sophisticated understanding of error. This, they propose, will assist in reducing the incidence of preventable injury and result in a more efficient allocation of resources to those injured - negligently or otherwise - in the course of medical care.

Merry and McCall Smith make it apparent that the problem of medical harm, far from being one stemming from under-performing doctors or over-zealous litigants, is a complicated and systemic problem, much of which is linked to a fundamental misunderstanding of the nature of error in medical treatment. It is a sophisticated and accessible work, and many of the concepts explored would be equally applicable to other areas of tort law. The book's focus, however, is on medical error generally, not upon medical negligence litigation and as such, legal concepts and case law are discussed in a broad sense only. It is an eminently sensible book, drawing upon multi-disciplinary thought and real-life experience. A genuine concern for the reduction of error is evident throughout, particularly in the authors' creative and thoughtful suggestions for law reform.

Aaron Ilya Kloczko
BCom, LLB student
Macquarie University

NOTES

NOTES