CLINICAL ETHICS

Medical harm and the consequences of error for doctors

Paul M McNeill and Merrilyn Walton

ABSTRACT

- Mistakes in medicine, particularly when patients have suffered harm as a result, are of ethical concern as breaching a fundamental injunction in medicine: "first do not harm".
- To minimise the chances of a recurrence, an effective response to harm must take into account both the concerns of patients who have been harmed and the concerns of doctors who may fear extreme outcomes if a mistake is admitted.
- There is an apparent conflict between a need to respond to errors non-punitively, on the one hand, and ethical and legal requirements for accountability and compensation for anyone harmed, on the other.
- There is also confusion between arguments for a "blame-free" culture in the healthcare system and the need to attribute responsibility in some cases.
- Important elements in an ethical response to mistakes include disclosure to the patient and family; taking appropriate clinical steps to mitigate any harm that may result from a mistake; identifying the process leading to harm; and responding in an appropriate and humane manner to minimise the likelihood of any recurrence.

MJA 2002; 176: 222–225

MANY RECENT ARTICLES have considered the consequences to patients of medical error and some have examined the changes that are needed to medical systems to reduce the likelihood of medical error.[1-4] The once clear injunction to doctors, "first do not harm", now appears to be not so simple. Along with an increase in the number of diagnostic tests and effective treatment options there has been an increase in potential for harm, as many treatments and diagnostic tests carry their own risks. The potential for harm is further increased by the number of health professionals involved in the care of any one patient and the size of healthcare institutions, the consequent need for increased communication and the complexity of systems employed. An article published in the Journal in 1995 revealed that medical management harmed a high proportion of patients.[5] Estimates from the United States suggest that medical errors result in the death of up to 98 000 patients each year, which would make it the eighth most common cause of death in that country.[1,6]

Little attention has been given to the ethical issues surrounding doctors' mistakes and their outcomes. One reason for this is that, as some claim, medical culture supports a myth of infallibility and error-free performance that leads to reluctance to openly discuss mistakes when they occur.[7] This tendency is reinforced by the emphasis of medical ethics on the moral underpinnings of decision-making — that is, on what doctors *should* do. There has been little recognition of the realities of medical care in a pressured environment that is far from these ideals. Nor has medical ethics provided a platform to analyse mistakes from an ethical perspective when they inevitably occur.

Another reason for the lack of attention to ethical issues associated with medical error is that mistakes in medicine are most often discussed in disciplinary and legal arenas, which heightens fear of the consequences for any doctor who reveals a mistake.

In this article we address some of these concerns by examining ethical issues raised by mistakes in four authentic cases. In doing so, we wish to counterbalance the tendency of doctors to focus on legal consequences (real or imagined), anticipate the worst and overlook important ethical concerns.

In presenting these cases we also wish to address the apparent conflict between an approach that deals with errors "non-punitively" and a need for review that includes accountability and compensation for patients when they have been harmed.[1,7,8] We acknowledge that it is in everyone's interest to create a trusting environment in which there is open disclosure of error. We are not suggesting, however, that there should be no consequences for doctors whose mistakes are the result of unethical behaviour. We assert simply that a realistic appraisal of issues involved in particular cases may assist doctors in being more open about their mistakes and learning from them. We believe this will, in turn, reduce the number of patients harmed.

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Case 1

A diabetic woman reported shortness of breath and severe, intermittent chest pain to an endocrinologist. He suspected a heart problem and referred the woman to a cardiologist,

who carried out some investigations, confirmed the presence of coronary artery disease and referred her to a cardiothoracic surgeon for coronary artery bypass graft surgery.

The operation was uneventful. However, her chest pain became more severe and persistent. Cardiological tests appeared to exclude continuing cardiac ischaemia, and all her specialists (surgeon, cardiologist and endocrinologist) assumed the pain was due to the local effects of the operation. After some weeks the patient returned to the endocrinologist in significant distress. A second cardiologist was consulted and he concurred with the view that the pain was post-surgical in origin and recommended symptomatic treatment for pain only. The endocrinologist did not pursue the matter further. Two months later the woman saw her general practitioner, now complaining of abdominal pain. He arranged a computed tomography scan, which showed widely disseminated carcinoma of the pancreas. The condition was untreatable and the patient died a few weeks later.

Case 2

A four-month-old baby was mistakenly prescribed 12 mg of d-tubocurarine instead of 3 mg in preparation for surgery. The baby suffered an anaphylactic reaction, was resuscitated and transferred to intensive care, where she recovered. The report of this incident states:

> The parents were informed of the mishap by the senior anaesthetists as soon as was possible after the medical emergency. They were told that the anaesthetic registrar mistakenly thought he had completed diluting the drug but had not (having been distracted . . .). [O]nce the mistake was recognised the baby was efficiently treated. Counselling and specialist advice was provided to the parents.[9]

The NSW Health Care Complaints Commission examined all the circumstances and decided not to take further action. Its judgement was based on the view that the "practitioners involved had reacted professionally and had taken corrective action not only in this case but they also indicated they had introduced new procedures for administering drugs".[9]

Case 3

During a radiological procedure, a doctor mistakenly injected methylated spirits into a patient's femoral artery. This led to amputation of the whole back portion of the upper leg. The patient made a complaint that was considered by a Professional Standards Committee within the terms of the (then) *Medical Practitioners Act, 1938* (NSW). The Committee found that the doctor was guilty of professional misconduct in that he had "demonstrated a lack of adequate judgement and care in the information he chose to provide concerning his mistaken injection of methylated spirits". In particular, the doctor had written misleading and inaccurate notes in the medical record. It was not the mistake itself, but the fact that the doctor was untruthful about the event, that was of primary concern to the disciplinary body.[10]

Case 4

In the book *Margin of error*,[11] an American family physician candidly acknowledged having aborted a live fetus of 13 weeks from a woman who had wanted the child. This occurred because three consecutive negative urine pregnancy tests led the doctor to believe the fetus had died *in utero*. When a fourth urine test was also negative he proceeded with an abortion, only to discover he was removing live body parts, not necrotic tissue, as he had expected. In hindsight, the doctor recognised that he had made several mistakes. He had relied on the urine test alone and had not ordered an ultrasound test, his reason being that the nearest ultrasound-testing facility was 110 miles away and that this would have added to the cost for a couple with limited means. Furthermore, he had allowed the negative results from the urine test to overrule his intuitive sense that the woman's uterus felt bigger immediately before the abortion than it had done even two days previously. He attributed his mistakes to a lack of skill (and presumably lack of confidence) in pelvic examination.[11]

Discussion

While each of these cases had serious (or potentially serious) outcomes for the patient (or fetus), the four cases are presented in increasing order of concern from an ethical perspective and in terms of the consequences for the doctor. The predominant ethical issues in all four cases centre around competence and communication. These issues are vital to the trust between doctor and patient and are of ethical concern because of the difference in power between doctors and patients. Patients have no adequate means for testing a doctor's competence and are reliant on the communication between themselves and their doctor to assess the risk to themselves.

Case 1: The endocrinologist in Case 1 continued to have concerns about his failure to diagnose carcinoma of the pancreas.* Had the true nature of the patient's condition been identified earlier she would at least have been spared the pain and discomfort associated with a heart operation. The relevant ethical issue here is the competence of the doctor. Even though, in hindsight, the presentation was unusual and the progression of her symptoms had been atypical for ischaemic heart disease, this was a mistake that many other competent physicians might well have made in the same circumstances. In this case, three other specialists failed to make a correct diagnosis. The standard of care that is ethically (and legally) expected is not error-free

* The endocrinologist reports feeling "an abiding sense of dismay at my failure to pursue the patient's symptoms more rigorously". As carcinoma of the pancreas generally responds poorly to treatment, the outcome would probably not have been different had a correct diagnosis been made in the beginning. Nevertheless he was concerned that the patient could have been saved pain and discomfort (personal communication).

performance, but the level of competence and skill that could be expected from a similarly qualified doctor. All four doctors were competent in terms of the adequacy of their training and by comparison with their specialist colleagues. The fact that the endocrinologist discussed the case with others before and after surgery is further support for the thoroughness of his deliberation. Any medical practitioner may well regret a misdiagnosis, but few (when called on to pass judgement on others) would find fault in a fellow professional who diagnosed a likely cause and missed an exceptional one. In terms of the adequacy of communication, there was a full and frank admission of the circumstances with this patient that allowed a trusting relationship to continue up to her death. Openness in discussing the case within the profession has enabled others to learn from the error. For all these reasons, while regrettable, this is not a case of unethical treatment.

Cases 2 and 3: Cases 2 and 3 illustrate a basic proposition: that when a mistake has been made, there is an ethical obligation to openly disclose the mistake and take whatever action is available to rectify the situation. While veracity may be an ideal in all relationships, it is an ethical necessity between doctors and their patients — even more so when a patient has been harmed by a doctor's action or oversight (whether in diagnosis or treatment). The reason for this is that patients need this information to come to terms with the consequences of any mistake and to participate in decisions about corrective measures that might be taken. When doctors are honest about mistakes, patients are more likely to maintain trust and to accept that, notwithstanding the mistake, the doctor has their best interests at heart.[12,13] Any suggestion of a cover-up (as in Case 3) becomes a cause for concern and increases the likelihood of patients losing trust in their doctor. Openness is both ethical and recognised by courts and disciplinary authorities as mitigating the harm for the patient.

Cases 2 and 3 illustrate that failure to respond openly to errors of judgement may be considered unethical behaviour and amount to professional misconduct.[9] There are many cases (described in the reports of disciplinary authorities) in which a doctor has made a mistake and responded openly. These cases have not led to disciplinary action, notwithstanding the fact that in some of these cases the patient has been injured.[9,14-18] Even if there is a civil case for compensation, the doctor stands a better chance of minimising harm to a patient and to him- or herself by responding in an open and ethical manner. Conversely, blaming other health professionals, withholding information or, worse still, changing records to purposely mislead are ethically reprehensible actions that create a breach of trust with any patient and are unlikely to be condoned by disciplinary authorities.

Case 4: Whereas the major ethical issue in Cases 2 and 3 relates to communication, Case 4 concerns a doctor's competence. Although the doctor in this case maintained open and honest communication with the couple, there are major concerns about his skills in diagnosis and management. Competence is clearly an ethical issue in that lack of skill and adequate training is likely to lead to harm. If this case were to be considered by current standards in Australia, it is predictable that any doctor, asked to give a professional opinion, would find these errors unacceptable. From both an ethical and a legal perpective, there is a question about whether the doctor involved should be allowed to take responsibility for childbirth without surpervision. There is also a question about the responsibility of the profession and the hospital system for maintaining standards for unsupervised management.

From a legal perspective, we would anticipate that a doctor performing an abortion in the circumstances described would be found guilty of unsatisfactory professional conduct or professional misconduct (to use the terms from the New South Wales legislation) and be required to undertake further training or be subject to supervision or clinical audit. A more extreme outcome would also be possible, such as permitting the doctor to continue in general practice but barring him from obstetric practice. In our view, however, it is highly unlikely that this mistake would lead to deregistration. If the parents sought recompense through a claim for damages, there is every ground for expecting a finding against the doctor of failure to exercise an adequate (or due) standard of care. We predict that most medical indemnity or insurance companies would seek to settle out of court in these circumstances. Even so, openness is recommended — while it would not protect the doctor from adverse findings of disciplinary tribunals or civil courts, it would probably mitigate the trauma for the parents and reduce the severity of any judgement against the doctor.

Conclusions

These cases demonstrate that outcomes for doctors are largely determined by peer judgement of the doctor's competence and adequacy of communication as measured against standards within the profession. Examination of these cases gives some basis for addressing an apparent conflict between ethical practice that requires openness and trust in revealing mistakes (with a concomitant need for a "blame-free" culture) and a need for accountability to patients and the community generally.

We are not suggesting that there is a simple solution to this apparent conflict, but rather that an ethical appraisal of cases gives a better indication of how this conflict may be resolved in practice. We believe that the appropriate course for doctors is to maintain ethical and competent practice. When there is a mistake, it is in their own as well as their patient's interest to be open about it.[12] Any tendency to minimise or conceal errors may lead to more severe outcomes for patients and doctors and block the potential for learning from the experience for the doctor and others who stand to gain from an open appraisal of the mistake.

Competing interests

None declared.

Acknowledgements

The authors thank Associate Professor Paul Komesaroff, Eleanor Shaw Ethics Centre for the Study of Medicine, Melbourne, and Dr Ian Kerridge, Clinical Unit in Ethics and Health Law, University of Newcastle, for their suggestions and helpful comments in response to an earlier draft of this article.

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OBITUARY

Stephen Nicholas Hocking

MB BS, FANZCA

STEVE HOCKING was a respected anaesthetist in Perth who died at the age of just 39. He was born on 18 April 1962 and attended primary school at Jolimont in Perth and secondary school at Mentone Grammar School in Melbourne. He graduated in medicine from the University of Western Australia in 1986 and spent his internship and residency at Royal Perth Hospital.

On secondment from Royal Perth Hospital, Steve worked in Kalgoorlie as a Resident Medical Officer. While there he took up parachuting, until his fellow RMO broke his ankle participating in the same activity, forcing Steve to do the work of both of them. In 1995 he spent three months in Port Hedland working as Anaesthetic Registrar, and, after obtaining his Fellowship of the Australian and New Zealand College of Anaesthetists in 1996, he spent a year in Pittsburgh, Pennsylvania, as Associate Professor of Anaesthesiology. He returned to Western Australia in 1997, where he worked as a sessional anaesthetist at Royal Perth Hospital before moving solely to private practice.

As a doctor and anaesthetist, Steve's focus was always his patient. Woe betide any clipboard-carrying nurse who tried to get in the way of his postoperative analgesia orders. His fierce advocacy and compassion for his patients was perhaps partly a result of having been a surgical patient himself and having experienced a chronic illness. This was always something that he bore privately and without complaint. His attitude to his own illness was to accept it and just get on with life. In the operating theatre he was always calm and precise; the sort of anaesthetist that other doctors would want to be anaesthetised by. He was also funny, but his humour was delivered in a characteristically dry sort of way that people would miss if they didn't know him well.

Steve developed metastatic cholangiocarcinoma in October 2000 as a complication of ulcerative colitis, which had been diagnosed when he was only seven years old. He pursued active treatment for as long as this gave him the opportunity to return home to spend more time with his wife Jane and children Oscar and Rupert. He died on 6 October 2001.

Steve told his wife that the only regret of his life was his death. He will remain forever young. The measure of Steve's life should not be in its length but in its worth and in the legacy that he leaves. He was a good man.

Robert J Davies