**Book review**

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**ABSTRACT**: author-surgeon’s book describes the limitations of surgery and improvements and the scope for future advances.

**Complications: a Surgeon’s Notes on an Imperfect Science**  
by Atul Gawande  
Metropolitan Books, Henry Holt & Coy LLC, New York, 2002  
269 pages, no index.  
US$24

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THE writer is a surgeon and staff writer for the *New Yorker* magazine. He is also a teaching professor at the Harvard Medical School. He is one of several New England surgeon/teacher/essayists, for example, Sherwin Nuland, of Yale University Medical School (*How we die*, 1994; and *The Wisdom of the Body: How we live*, 1997), and Jerome Groopman (*The Measure of our Days*, 1998; *Second Opinions*, 2000; and *The Anatomy of Hope*, 2003) also of Harvard. All three write well and knowledgably and this reader would expect a similar high standard in their practice of surgery.

Gawande’s research interest is in improving surgical care in the US and developing countries and forms the basis of this collection of essays which have previously been published in the *New Yorker* and the online internet “magazine” *Slate*. I can recall having previously read several of these articles in the *New Yorker*. While this volume lacks an index it does have chapter notes, allowing the reader to delve deeper if desirous of doing so.

Gawande investigates why it is that things go wrong — it is not because there was no need for the word “iatrogenic” that it was coined: this is where the medical care is indeed worse than the disease. An interesting observation is that according to research cited by the author medical malpractice suits do not reduce medical error rates (this is a contradiction of the rationale cited by plaintiff trial lawyers that tort litigation is the only effective learning process for otherwise indifferent tortfeasors). Added to that, fewer than 2 per cent of patients who do have a cause of action actually litigate. And, of the medical malpractice suits filed, only a small minority are held to be victims of negligent care, and the best guide to ultimate success in litigation is the severity of the patient’s adverse outcome regardless of causation.
The medical profession has borrowed from other professions in seeking to improve standards — immunity from punishment for voluntary and honest reporting of “incidents” and flight simulators from the aviation industry and “human factor” engineering leading to standardised controls for medical machinery. A recent innovation is the “patient simulator” allowing the surgeon to practise, to experiment, to hone surgical skills or to rehearse a ticklish operation in advance. Previously this could only be accomplished on real live patients.

The common thread of these essays is to show the limitations of modern medicine and its practitioners to repair our diseased and damaged bodies. There are 14 articles under three sections headed “Fallibility”, “Mystery” and “Uncertainty”. In truth, these divisions are porous and many of the articles could have been included under any or all of these headings.

Fallibility looks at the limitations of the individual practitioners, those inherent in the training of surgeons (“see one, do one, teach one”), their continuing education and the maintenance and improvement of their skills (including learning from their errors, both their own and those of their colleagues) and the easy road to incompetence by way of drug and alcohol abuse. For completeness I would have liked Gawande to have included the issue of the once competent surgeon who has postponed retirement indefinitely and is no longer able to recognise that their competence has deteriorated and now poses a threat to their patients. Readers might like to consider that their own errors may permit our “patients” to appeal an adverse outcome and the fact that we are under the scrutiny of our fellow practitioners and the bench. Of course, this does not solve the ticklish problem of informing and convincing the elderly practitioner, medical or legal, that now is time to be tending the rose garden.

Thus, while “Fallibility” covers the limitations of individual practitioners, the next division “Mystery” is concerned with that which is unknown to the profession. Despite the marvels of modern medicine there still remain areas where the best the profession can offer is to stand aside and wait and watch and hope. Medicine is not an exact science and not every malady has a remedy and not every adverse outcome is evidence of malpractice deserving of compensation.
The final section “Uncertainty” deals with the necessity of proceeding despite imperfect or incomplete knowledge: decision making under uncertainty. This area has led to a recent “Nobel laureate” in Economics for Daniel Kahneman and should be familiar to Bar News readers. It is common experience to us and concerns a judge and jury being called upon to determine a factual happening despite their having no direct knowledge whatsoever of the incident being enquired into, for example, the state of the traffic light facing the defendant immediately prior to the accident. However, they are called upon to proceed upon the basis of the incomplete information allowed them and subject to the filtering process of the rules of evidence and the tactics of the parties and their advocates. Thankfully they are permitted to found their decisions on “the balance of probability” or “beyond reasonable doubt” (whatever that means) and are not required to try for beyond doubt or without doubt. Further, the surgeon’s decision making under uncertainty may not allow for unhurried thoughtful contemplation because of the urgent need for immediate action. Consider the difficulty created by the apparent urgency of a simple non-urgent problem with a simple solution! As the old saw goes — hindsight has 20–20 vision.

When should the surgeon ignore “intuition” and be guided only by objective observation? Or vice versa? What about the serendipity of fate where the visiting surgeon with an interest in an obscure area of practice has altered the timing and order of the routine visiting to his local hospitals (because of weekend guests) and just happens to be on hand when this expertise is most urgently needed? Today’s biopsy that discloses that which yesterday’s failed to detect? When is it best to leave well enough alone and leave nature to its course without interference (“don’t do something, just stand there!”)? How does a surgeon know?

Of particular interest is the junction of the two professions where the practitioners are called upon to determine a doubtful issue, for example, of child abuse (particularly where the victim is deceased or is unable to assist in the determination). Unlike the actors in the legal drama Gawande permits himself to harbour doubts. This is of contemporary relevance given the well publicised reference by the English Attorney-General allowing the reinvestigation of those mothers convicted and jailed for the murder of their children — three mothers have been released so far and the “expert witness” for the prosecution has been struck off the medical register. In January this
year, an article in the medical journal *Lancet* finally discredited the hypotheses of Sir Roy Meadow who single-handedly devised Munchausen’s Syndrome By Proxy (MSBP) and the so-called Meadows’s Law (that infant apnea/SIDS is in reality infanticide) on the basis that unexplained infant deaths are independent of family relations. All the experts consulted by Gawande conceded these cases do not involve direct physical evidence, the only basis for criminal prosecution being a “suspicious” pattern of otherwise unexplained infant deaths.

The author brings his lay qualifications to bear here as a parent who has accompanied his infant daughter to the casualty ward with a suspicious arm fracture. As the accompanying parent the author was grilled by the suspicious medical staff (he suggests that his social status as a fellow practitioner assisted in allaying the concerns of his interrogators). He himself has played the role of the suspicious medico in an instance of a badly scalded two-month old boy. Similarly, as a “patient” (and not as a surgeon), in the essay discussing how the patient and the practitioner arrive at the decisions affecting the patient’s care, he relates the powerlessness felt by him a fortnight after the premature birth of his youngest daughter who required major surgery. Notwithstanding his well-informed medical credentials the author surrendered the decision-making to the attending physicians. The author’s recollections remind me of the Australian surgeon who, after suffering horrendous injuries in a car smash, wrote of his experience as a patient and compared this experience to his prior conduct as a surgeon — wearing the other man’s shoes so to speak.

Let’s hope that juries in personal injuries- medical malpractice cases haven’t read this book because it places the surgeon as a human undertaking responsibility surrounded by uncertainty and doubt. Instead of expressing outrage at their ability to stuff things up and sue the bastards perhaps we should wonder at what they can accomplish despite the incompleteness of their knowledge.

I shall go out on a limb and suggest that this volume makes for interesting and entertaining reading by members in addition to lay readers.
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