Perspective: **Should We Amputate Medical History?**

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Abstract

This Perspective article, a *cri de coeur*, argues that a modicum of medical history should be incorporated into the compulsory medical curriculum. Many medical schools have no formal teaching in the subject, and students can thus graduate without the slightest knowledge of their profession's history. The author argues that, aside from holding intrinsic interest, a knowledge of the history of medicine can provide students with a sense of perspective and connectedness with the past, better judgment and reasoning, a healthy dose of humility, a deeper understanding of professionalism, greater emotional maturity, and a more critical approach to contemporary medicine. The author provides several concrete illustrations of the value of medical history to clinical practice. In answer to the rejoinder, "to replace what?" the author proposes "a little part of medical ethics," and points out that both disciplines share much in common and can be usefully combined. Finally, the author address the challenges of the proposal to incorporate medical history in the curriculum, in particular the difficulty of finding suitable teachers.

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In the Hunterian museum of the Royal College of Surgeons in London, an 1850 lithograph depicts a traumatized patient surrounded by three smartly dressed doctors. One of them is grasping a saw. The patient, strapped firmly to a chair and covered in bandages, has no arms or legs. The caption reads, "This is how I looked after what the doctors call heroic treatment." (See this month's Medicine and the Arts column, p. 1166–1167.)

Behind the dark humor lies much truth. In the pre-Listerian days of that macabre lithograph, postoperative mortality was around 40%.[1] Even in the early part of the 20th century, nearly half of patients undergoing brain surgery died, usually from bleeding, herniation, or infection.[2] Drugs were not much more effective than surgery. In 1860, Oliver Wendell Holmes suggested that if all medicines "could be sunk to the bottom of the sea, it would be all the better for mankind, and all the worse for the fishes."[3] Until fairly recently, then, going to see the doctor stood a good chance of being harmful to one's health.[4] In this context of therapeutic paucity, the dictum "above all, do no harm," which may today seem trite, was quite an insight.

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Several commentators have pointed out the value of studying and understanding medical history to clinicians and medical students.[5–8] Revisiting medicine's eventful past teaches students to be skeptical about contemporary medicine rather than accept it unreflectively, to gain a sense of perspective and continuity by broadening their intellectual horizons, to improve their judgment, reasoning, and social comprehension, and to be inspired—or rightly appalled—by historical figures, events, and practices.[9] Not least, studying medical history helps students develop their curiosity and instills a spirit of inquiry that should stand them in good stead in their future roles as clinicians and researchers.

In 2007, I set up an annual course in applied clinical ethics at Imperial College London, targeted at the seemingly expanding number of clinicians wishing to gain a firmer grounding in medical ethics. As I was free to determine the content, I invited an academic medical historian to deliver the opening session. Before engaging in the substantive debates in clinical ethics, such as the ethical minutiae of consent, confidentiality, and end-of-life decisions, I wanted to situate the current state of medicine and medical ethics in a broader historical context. The historian spoke on the nature of the doctor–patient relationship, from the ancient Greeks to the present.[10] It proved to be one of the most popular sessions.

In their feedback, participants talked of their newfound sense of perspective and wondered whether, a hundred years from now, doctors may tut-tut in dismay at their current practice, as they had only just done with their predecessors. It is noteworthy that such a change occurred after a single 90-minute session on the subject. The time commitment need not be onerous. The key is to painlessly inject the medical history "bug" into students, preferably early on in their medical studies, so that they will appreciate the relevance of the subject and, perhaps, pursue this interest in their own time.

How else might this interest be awakened? Despite my success with the medical historian lecture, William Osler's method of asking students on the wards to research some historical aspect of a patient's condition and to present the findings briefly on a subsequent day is likely to be a yet more effective learning method than didactic lectures. I have argued elsewhere for similar ward-based ethics teaching, for the link between ethical concepts and clinical reality then becomes evident to even the most pragmatically minded students.[11] To illustrate the limitations of traditional, book-based learning, I included in that article a stanza from Lewis Carroll's *The Hunting of the Snark*, in which the Butcher teaches all he knows about the Jubjub bird to his friend the Beaver:

> While the Beaver confessed, with affectionate looks
>
> More eloquent even than tears

> It had learned in ten minutes far more than all books
>
> Would have taught it in seventy years[12]

In justifying the importance of medical history, Osler quoted Fuller: "History maketh a young man to be old, without either wrinkles or grey hair; privileging him of the experiences of age, without either the infirmities or inconveniences thereof."[13]

The benefits of knowledge of medical history do not end with enlivened curiosity and heightened acumen. The idea for this article emerged from Sir St Clair Thomson's claim that studying medical history allows doctors to "absorb, unconsciously, from its proud records, a high standard of ethics."[14] Indeed, one cannot fail to be inspired by the astuteness of Ignaz Semmelweis, who in the mid-19th century discovered that unhygienic medical students were responsible for the high mortality rates in the maternity clinic and implemented hand washing before deliveries, or the brilliance of Harvey Cushing, whose neurosurgical techniques made brain operations other than "a polite way of committing suicide."[2] So, might a better understanding of medical history fulfill an ethical function?

It is plausible that reading about the greats of medicine and the profession's high points will inspire students to improve their doctoring, first by encouraging them to develop their technical and research skills and, second, by sharpening their ethical conviction to do what they believe is right. A person's ethics can also be improved or reinforced by pondering, and learning from, cases of *unethical* conduct. Here, the Nazi medical experiments, the Tuskegee studies, the Milgram experiment, and the coercive, though often well-intentioned, work of colonial doctors in Africa spring to mind. Looking back at past events and practices, and examining what was right and what was wrong, what worked and what did not, can yield fruitful lessons for the present, both at the microlevel of the clinician–patient relationship and the macrolevel of health care policy. Through such exposure, and with accompanying discussion and reflection, an appreciation of medical history can help develop the wisdom and moral virtues necessary for good doctoring.

However much medicine has changed over the centuries, a common thread runs through the many generations of doctors that have cared for patients, from the pre-Hippocratic healers to the modern-day superspecialists. An appreciation of this connection with the past can promote an understanding of professionalism as applied to medicine and can fill the student's heart with a sense of pride and responsibility. Thus, a knowledge of medical history, I propose, is also conducive to greater emotional maturity. Furthermore, as Duffin writes, "history provides a strong antidote to the arrogance that tracks medical life like an occupational hazard."[5] In *Clio in the Clinic* (Clio is the muse of history in Greek mythology), Duffin[9] has assembled dozens of essays, written by clinician–historians, on how knowledge of medical history can inform clinical practice, from aiding diagnosis to providing struggling physicians with comfort, courage, and inspiration from the experiences of their predecessors.

In one of the essays, the surgeon Sherwin Nuland describes the thrill of a most unusual operation: a 19-year-old patient had a perforated diaphragm, in which a trapped section of colon became gangrenous and created an opening for the bowel contents to leak into the chest.[5] Although he had been splattered with feces from the thoracic wall incision, Nuland looked forward to the "glorious moment" when he could recount his unique case at the surgical grand rounds. A few hours before the meeting, he met his erudite chief and proceeded to tell him with unbounded enthusiasm the circumstances of the case. "I have never forgotten his exact words," writes Nuland: "I suppose you think you're the first surgeon who's ever seen such a thing,' he [the chief] said quietly." The chief took his protégé to his office, opened a dusty volume by the 16th-century surgeon Ambroise Paré, and read out an exact description of the case. Nuland concludes, "Until that moment, I had never previously found it [medical history] to have any connection with my clinical work. Medical history was no longer merely a pleasurable accompaniment to surgery; it was intertwined inextricably within it, and within me."[5]

For all the reasons above, at least a modicum of medical history should form part of the compulsory professional and personal development curriculum theme in medical schools.

As the current medical curriculum is full to the brim, a proposal to include new material should be accompanied by a suggestion to remove old material. I propose reducing the number of medical ethics sessions, although I appreciate that in some institutions bioethics may fare as poorly as medical history. This proposal is not as drastic as it sounds, for I have suggested that medical history can contain a strong ethical flavor. My own interest in medical ethics sprung from the formal study of medical history. I wanted tools to assess the moral rightness or wrongness of past practices. Medical history can fulfill a similar function as medical ethics, encouraging students and clinicians to develop the right sensitivities toward themselves, their profession, and their patients. Both disciplines prompt reflection, and indeed it is quite possible for both subjects to be combined, each complementing the other. The real challenge is finding suitably qualified and inspiring staff to teach medical history (and the challenge is all the more arduous if adopting the combined history/ethics approach). Clinicians and ethicists with a knowledge and interest in medical history would be ideal, although such creatures are likely to be rare. Professional medical historians, including postgraduate students, would also be appropriate.

In the present climate, so-called peripheral subjects are amputated in favor of core areas. The limbless patient in the lithograph can represent the contemporary medical curriculum. In some medical schools, this has resulted in the total excision of medical history. So, although the subject forms part of the compulsory curriculum at the University of Liverpool's medical school, for example, it is absent from the core curriculum in various London medical schools.[15] Medical students can graduate without the first clue about their discipline's history.[16] It is high time to revive the history of medicine. Unlike the appendages of the unfortunate patient in the lithograph, this limb can be saved with scant risk of harm and considerable benefits.

References

1 Porter R. The greatest benefit to mankind. London, UK: HarperCollins; 1997.

2 Bliss M. Harvey Cushing: A Life in Surgery. Oxford, UK: Oxford University Press; 2005.

3 Charatan F. Worse for the fish. BMJ. 2004; 328:1371.

4 Wootton D. Bad Medicine: Doctors Doing Harm Since Hippocrates. Oxford, UK: Oxford University Press; 2006.
5 Nuland S. The night I fell in love with Clio. In: Duffin J, ed. Clio in the Clinic: History in Medical Practice. Oxford, UK: Oxford University Press; 2005:19–26.
6 Arnott R. The University of Birmingham Medical School and the history of medicine. Med Humanit. 2002;28:33–34.
7 Roland C. Letter to the editor: Teaching medical history in Canadian universities. Can Med Assoc J. 1964;90:887.
8 Smith M. Medical students and history of medicine: Shall the twain meet? J R Soc Med. 1996;89:530.
9 Duffin J, ed. Clio in the Clinic: History in Medical Practice. Oxford, UK: Oxford University Press; 2005.
10 Imperial College London. Applied Clinical Ethics. Available at: (http://www3.imperial.ac.uk/cpd/courses/subject/medical/ace). Accessed August 15, 2008.
11 Sokol D. William Osler and the jubjub of ethics; or how to teach medical ethics in the 21st century. J R Soc Med. 2007;100:544–546.
12 Carroll L. The Hunting of the Snark: An Agony in Eight Fits. Penguin Classics; 1998.
13 Osler W. A note on the teaching of the history of medicine. BMJ. 1902;2:93.
14 Thomson SC. The present need for the study of the history of medicine. In: Cope Z, ed. Sidelights on the History of Medicine. London, UK: Butterworth & Co.; 1957:1.
15 Sheard S. Developing history of medicine in the University of Liverpool medical curriculum 1995–2005. Med Educ. 2006;40:1045–1052.
16 Sokol D. A perforated education. BMJ. 2007; 335:1186.

Teaching and Learning Moments

Adverse Events: Learning the Science Behind the Art

My stomach turned when I answered my pager. As a fourth-year medical student in general medicine, I felt I could handle most situations, but this one caught me off guard. It was about a patient I had just discharged, and read "new admission: probable drug reaction, rule out Stevens Johnson."

Instantly the culprit medication came to mind – Bactrim. During her last admission, I had diagnosed Ms. SR with a urinary tract infection (UTI) despite the absence of symptoms and decided to treat her for concerns of loss to follow-up. Reviewing her record now, I was shocked to learn that Ms. SR had a documented allergy to sulfa drugs. Somehow a week earlier, I had missed it.

After interviewing Ms. SR, I concluded her story fit perfectly with a drug reaction, though she repeatedly denied any drug allergies. The realization that my error had led to her suffering made me feel guilty, ashamed, incompetent, and frankly, physically sick. Through the rush of emotions, I recalled a course in patient safety I took during my second year of medical school. Errors do not result from the failure of one person or one system; instead, they result from multiple failures in multiple systems. To best address an adverse event, I had to first try to understand it.

While I initially could not move past my own mistakes, I eventually pieced together the adverse event step by step. First, Ms. SR denied having any drug allergies despite having a history of a drug reaction. Second, her electronic medical record was incomplete. The allergies section of her chart was empty, despite multiple discharge summaries that documented allergies to sulfa. Third, I did not review her record as thoroughly as I should have and failed to practice evidence-based medicine by treating an asymptomatic UTI. Fourth, the prescription for Bactrim was signed by my resident with little oversight, despite my status as a medical student. Finally, underlying these failures were both the culture of my team, which emphasized efficiency over safety, and our workflow, which at times was overwhelming.

Next, I went to see Ms. SR. I began by asking her what her understanding was of how she became ill. I made it clear that her suffering was because of a mistake I had made and apologized. After a period of silence, she asked, "What now?" "Now we are going to get you better again." She replied, "Okay doctor, tell me what I need to do." I have never felt closer to a patient than I did at that moment.

Afterwards, I took small steps to decrease the chances this would ever happen to Ms. SR again. I updated the allergies section of her chart and discussed with Ms. SR the significance of her sulfa allergy. And finally, I discussed the case and my safety concerns with the medical team.

This experience taught me that responding constructively to an adverse event can be learned. While I initially felt overwhelmed by the situation, I was more prepared than I thought. Before I even saw my first patient, I had taken a ten-hour elective course in patient safety. The course had preprogrammed me to seek disclosure, and as a result I never once questioned telling Ms. SR the complete story. It also taught me how to disclose an adverse event, which helped me through what was a difficult conversation. Finally, the training gave me the right lens, so to speak, through which to understand how the event had unfolded. Without it, I may have simply dismissed the errors as inevitabilities instead of addressing them as preventable harm.

If only anecdotally, this case suggests the importance of patient safety training in medical school curricula. In medicine, we often focus on learning the science of medicine and leave the art to chance; in the case of addressing an adverse event, I think there is science in the art, one that can and should be learned.

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