

Medicine — a healing or a dying art?

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SUMMARY. *That medicine is a science is the popular belief, and this has been reinforced by the advent of 'evidence-based medicine', which assumes that scientific proof is required to support medical practice. However, the view of science implied is a narrow one, foreign both to pure scientists and to artists, and the art of medicine is devalued by the approach. There are both important differences and important similarities between science and the arts. The arts should contribute to evidence-based practice and education along with science, and have a role in many aspects of medical practice.*

Keywords: *evidence-based medicine; education; art therapy.*

Introduction

MEDICINE has long been considered a science. Evidence for this is found in consideration of the content of undergraduate preclinical curricula, in which the basic medical sciences have been used as near-exclusive preparation for a clinical career. This approach is now reinforced by the trend towards evidence-based medicine, in which knowledge and practice are based on 'scientifically proven' facts.¹ The belief that an 'unscientific' practice is by definition a 'bad' practice is likely to receive further support.

It was not always thus. Until recent times, physicians received a very different sort of education. Their degree studies included the classics and philosophy *before* they embarked upon medical studies; their medical studies comprised mainly reading of the philosophers such as Hippocrates and Galen. This study, which had more in common with the arts and humanities than with pure science, was designed to educate rather than train² and enable physicians to continue their education throughout their career. (A similar argument is proposed on behalf of evidence-based medicine.³)

In this century, emphasis on the basic sciences and experimental research has increased qualitatively and quantitatively. Clearly, the advances in medical science and research, which have proceeded at a much more rapid rate than could have been predicted or would have been possible by a backward-looking Galen-contemplating approach, have justified a scientific educational attack on medicine. But this has been at the expense of artistic and humanities education, and it is likely that the art of medicine has been sacrificed for the science.^{4,5}

In evidence-based medicine, as presented by its enthusiastic exponents, the best evidence is assumed to be provided by a randomized controlled trial (RCT) or by meta-analyses of several RCTs. 'Epidemiological and biostatistical ways of thinking' are encouraged exclusively,¹ and this is seen as the route towards a critical approach to medicine.

But what of sources of evidence and modes of thought other than these? A narrow view of medicine and science is implied by this approach, which excludes consideration of the *art* of medi-

cine and of science. A more artistic approach would include individual involvement with each unique case on an emotional level.⁶ Science, which measures repeatable elements in a detached way,⁶ is not equipped for this. Teaching of art can make a significant contribution to the issues of judgement and critical appraisal that are central to evidence-based medicine. In a time when much 'pure' science has expanded its outlook to take in philosophical, artistic and even theological considerations (e.g. references 7 and 8), it appears odd that medicine should propagate a reductionist view of available evidence.

Higher education is expected to lead to levels of learning beyond the acquisition of factual knowledge,^{9,10} and science, properly taught, can certainly reach these levels. Importantly, this should include critical analysis of the basis of knowledge, rather than only 'received wisdom'. It is important to recognize some of the commonalities between scientific, artistic and humanitarian modes of thought, all of which can lead towards the desired educational goals. Similarities include rational and critical thought, appraisal of and reflection on experience and evidence, with informed debate, the generation and testing of hypothesis, and openness to alternative viewpoints. It is equally important to recognize that there are aspects of medicine other than the purely scientific, such as communication, ethics and empathy, aspects of healing other than purely drug induced or surgical (e.g. the placebo effect), and aspects of ill-health that do not conform to a predictable scientific model (e.g. psychosomatic illness). These may be impossible to subject to scientific measurement as they are concerned with emotional states, yet they need to be addressed within medical education.

The norm in medicine is to consider evidence that is 'scientific' as useful, and the follow on from this is that this 'scientific' way of thinking is the only 'correct' way. We can now go even further and say that 'scientific' usually means 'epidemiological and biostatistical'.¹ A view such as this of medicine as a science must be as alien to a pure scientist as it is to an artist. Other evidence *can* be useful, and can be studied critically. This might include evidence that is not based on repeatable experiment. Experiential evidence can be valuable if it is supported by reflection and discussion with peers or seniors; this is the basis of 'reflective practicum'¹¹ or 'master class' teaching vital to architecture and music, and can restore respectability to 'anecdotal' evidence. Serious study or creative involvement with the arts demands an approach that is at least as rigorous and critical as any scientific approach; conclusions drawn or works created need be no less valid or valued through absence of quantitative data.

Art in the practice of medicine

Are there arguments for studying the 'non-biological arts' at medical school? To answer this we must examine what role, if any, these play in the practice of medicine as well as in education.

An enriching experience

First, the arts can form a vehicle on which experience may be enriched or learned. Doctors will have experienced themselves little of what they treat. For example, very few have gone through a terminal disease or serious mental disorder, and no male doctor has experienced childbirth. Yet, by reference to the vast artistic literature (e.g. see Downie's *The Healing Arts*¹²)

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that touches on these, they can learn something about what the experiences mean. This must lead to a greater ability to identify and empathize with patients. Patients, like doctors, learn much about the illness experience from the arts: films, plays and novels help them to contextualize and predict their own experiences. Families and societies too form much of their response to illness by reference to the arts, which represent a far greater reservoir of experience than they can possess themselves.

Therapy

Secondly, the arts can be useful in therapy. Much is made of *stories* in this context.¹³ There is often little difference between three forms of sickness story: the literary (e.g. Tolstoy's *The Death of Ivan Ilyitch*), the biographical or autobiographical (e.g. Chopin's letters¹⁴), or the case history written by the doctor and patient. It is surely no coincidence that many great poets and writers have also been physicians (e.g. Chekov, William Carlos Williams and Keats), and their artistic, linguistic and narrative skills would have been an asset to their medical practice. The teaching of literature in medical schools has its advocates, including the present Chief Medical Officer.^{6,15} The other arts also have a role in therapy or healing. 'Healing by catharsis' is a common concept in mental health, and catharsis can take the form of writing, painting, drama or music. In a recent radio interview (Radio 4, *Poetry Please*, 1 January 1995), Nicholas Albery, the poetry editor, cited evidence¹⁶ which suggested that poetry is as effective in treatment as drugs in moderate depression. Art and music therapists are employed in many regions, and psychodrama is an increasingly recognized therapy. Art in hospitals is seen increasingly as an important part of the therapeutic environment.¹⁷

Therapy is also important for doctors. As scientists, detachment (from their patients *and* themselves) would make it difficult for them to recognize internal conflicts, frustrations and stress. As artists they would not only be able to recognize these, but would also be able to address them through the arts (e.g. through writing, music or painting). There may be a case for training in creative arts to help doctors to place in context and channel the effects of these unavoidable and increasingly important aspects of their work.

The arts can also be therapeutic for society. Some illnesses may be the result of a 'sick society'; for example, overindulgence in the Western world leading to diseases of opulence, or the adverse health effects of deprivation and isolation.¹⁸ The arts can illustrate these to members of the society, and may also illustrate 'cures'. Kafka was partly concerned with this in his novels, and at another level, so was John Lennon in his songs.

Quality of life

Thirdly, the arts are important in developing the quality of leisure time. This in itself is therapeutic, and is particularly useful in filling 'sick time' in a fulfilling way. A fulfilling leisure time may lead to more effective functioning in other roles (doctor or patient).^{17,19}

A tool in teaching

Finally, the arts have a role in teaching. Literature and television, films and drama can all teach people (patients, society and doctors) what illness is, both in general and in particular. There has been a recent vogue in Hollywood for featuring conditions such as Parkinson's disease, autism, and mental and physical handicap in major films, and this can only lead to an *altered* perception of these conditions. 'The role of teaching is to make learning possible' and learning is 'changing the ways in which learners under-

stand, or experience, or conceptualise the world around them'.¹⁰ Therefore, these films teach us about the conditions that they feature. While this may be a different way from that in which doctors are expected to 'conceptualize' the conditions, it is important that they can see things as their patients do, as well as in a more technical way. This will lead to greater understanding of patients. Students must also learn much that a textbook or undergraduate experience would be unable to teach: about parental attitude to a handicapped child from Bernice Rubens *A Solitary Grief*; or about the effect of occupation, deprivation and environment on health from Emile Zola's *Germinal*; or about the sensitivity of the doctor-patient relationship from Fildes' painting *The Doctor* in the Tate Gallery. In other words, the arts can provide material for reflective practicum.¹¹

Inflammatory bowel disease — an example

If we take the example of inflammatory bowel disease taught as medical science, students will graduate with an understanding of the cellular and gross anatomy, physiology and biochemistry of the processes that cause this group of diseases, and their epidemiology. However, they may have little or no understanding that they are treating a disease that causes profound social, psychological and physical debility to the patient and to the patient's family; they may not understand the impact that suffering such a disease over a long period of time will have on the patient's psychological, social, sexual and recreational well-being.

Until doctors have built their own experience to a sufficient level, such appreciation can only come from a study of the *stories* of inflammatory bowel disease taught in a humane manner that encourages involvement with afflicted patients, and a sensitive yet critical appraisal of this form of evidence. Narrative accounts of illness, whether in the form of novel, biography, detailed medical records, qualitative research *or talking with patients*, will provide students with knowledge of a disease far greater than a traditional scientific approach would allow. Brody, in his attempts to address this gap in the medical literature *Stories of Sickness*.

Empathy is 'feeling' derived from personal interpretation of a particular set of circumstances,²⁰ and as such, may be an art; however, the proper interpretation requires a scientific and social context for validity. Downie¹² affirms that we learn from the arts by 'imaginative identification with situations or characters depicted, and by having our imaginations stretched through being made to enter into unfamiliar situations or to see points of view other than our own'. This is surely essential to empathy, and therefore, to the teaching and practice of good medicine. It is also essential to mature consideration of ethical issues, another vital medical educational goal. An approach that is narrowly 'scientific' must be detached and impersonal. This will lead to retraction or escape into evidence-based therapies without the doctor having to consider the non-physical aspects of disease. Furthermore, objective consideration of this evidence exclusively must lead to judgements, and therefore, to clinical decision-making that excludes ethical consideration. What kind of monster will this generate?

Implications for teaching

We can see that the arts have a large role in the practice and teaching of medicine, probably in conjunction with science. What does this mean for the practice of medical education?

Before we can properly understand and advise on any patient's experience, it seems important to have some idea of one's own position in life and humanity. An aim of higher education is to encourage the intellectual, ethical and emotional development

that would lead to this.^{9,21} In medicine, as it stands at present, there is probably little opportunity for this kind of development,²² although it is to be hoped that this will improve when the changes in education recommended by the General Medical Council²³ and the King's Fund²⁴ are implemented: an overarching aim of these is to reduce the factual knowledge burden and increase the opportunity for critical thinking. Evidence-based medicine as it is proposed can achieve some but not all of this aim.

Some places are well in advance of this. The University of Dundee had (until recently) a writer in residence, the poet Don Paterson, part of whose time was spent with second-year medical undergraduates. With them, he carried out creative writing exercises designed to explore the meaning of being a human, the richness of language for communication and the value of one's own experience (D Paterson, personal communication). His successor, John Burnside, now continues this development. In the new medical curriculum proposed by the University of Aberdeen (among others), there will be an 'elective' period of some months' duration when students will have the opportunity to study a non-medical subject, such as an art. This innovation appears to some as an irrelevance, but follows entirely a recommendation by Downie & Charlton.²⁰ This, it is hoped, will allow some of the benefits outlined above, and lead to an appreciation of at least one way of thinking other than the 'medical' (that is the epidemiological and biostatistical) way.

Conclusion

We have reviewed the benefits of encouraging artistic modes of intellectual development in addition to scientific modes in our medical schools. Similar arguments could probably be made for social scientific, political, commercial, philosophical and theological modes. We come, then, to see medicine not as a science but as a discipline that represents a culmination of all these other disciplines. This leads us to realize that many of the presumed distinctions between disciplines are artificial, based on tradition, politics, power, paradigms or single-track modes of thought. It might be better to move away from an approach to medical education that is based in 'science' to one that is problem based (the 'problem' being the care of patients), encompassing all modes of thought relevant to the solving of the problem. This would include the arts and would encourage appropriate use of anecdote (valuing experience) and lead to intellectually rounded doctors. It would as now, however, encourage rigorous examination of *all* sources of evidence — scientific, literary, philosophical and otherwise.

Many GPs will have difficulty in embracing the concept of evidence-based medicine as it is presented. They will recognize that much of their work cannot conform to the limited evaluative straitjacket imposed by the approach.²⁵ Accordingly, general practice, because of its breadth of experience and epistemology, and its need to harness all sources of information available, may be an ideal place to introduce the considerations outlined here to our undergraduate students.

References

1. Davidoff F, Haynes B, Sackett D, Smith R. Evidence based medicine. *BMJ* 1995; **310**: 1085-1086.
2. Calman KC, Downie RS. Education and training in medicine. *Med Educ* 1988; **22**: 488-491.
3. Rosenberg W, Donald A. Evidence based medicine: an approach to clinical problem-solving. *BMJ* 1995; **310**: 1122-1126.
4. Weatherall DJ. The inhumanity of medicine. Time to stop and think. *BMJ* 1994; **309**: 1671-1672.
5. Naylor CD. Grey zones of clinical practice: some limits to evidence-based medicine. *Lancet* 1995; **345**: 840-842.
6. Downie RS. Literature and medicine. *J Med Ethics* 1991; **17**: 93-96, 98.

7. Hawking SW. *A brief history of time*. London: Bantam Press, 1988.
8. Tipler F. *The physics of immortality*. London: Macmillan, 1995.
9. Entwistle N. *Styles of learning and teaching. An integrated outline of educational psychology for students, teachers and lecturers*. London: David Fulton, 1988.
10. Ramsden P. *Learning to teach in higher education*. London: Routledge, 1992.
11. Schön DA. *Educating the reflective practitioner*. San Francisco: Josey-Bass, 1987.
12. Downie RS. *The healing arts*. Oxford: Oxford University Press, 1994.
13. Brody H. *Stories of sickness*. New Haven: Yale University Press, 1987.
14. Gal H (ed.) *The musician's world: letters of the great composers*. London: Thames & Hudson, 1965.
15. Calman KC, Downie RS, Duthie M, Sweeney B. Literature and medicine: a short course for medical students. *Med Educ* 1988; **21**: 265-269.
16. Philipp R. *WHO collaboration for mental health and the environment: a project on poetry and the art of medicine*. Environmental Epidemiology Report No. 172. Bristol: University of Bristol, 1994.
17. Senior P, Croall J. *Helping to heal. The arts in health care*. London: Calouste Gulbenkian Foundation, 1993.
18. Evans RG, Barer ML, Marmor TR (eds). *Why are some people healthy and others not? The determinants of health of populations*. New York: Aldine de Gruyter, 1994.
19. Fallowfield L. *The quality of life. The missing measurement in health care*. London: Souvenir Press, 1990.
20. Downie RS, Charlton BG. *The making of a doctor. Medical education in theory and practice*. Oxford: Oxford University Press, 1992.
21. Perry WG. *Forms of intellectual and ethical development in the college years: a scheme*. New York: Holt Rinehart & Winston, 1970.
22. Lowry S. *Medical education*. London: BMJ Publishing Group, 1993.
23. General Medical Council. *Tomorrow's doctors*. London: GMC, 1993.
24. Towle A. *Critical thinking: the future of undergraduate medical education*. London: King's Fund Centre, 1991.
25. Smith BH. Quality cannot always be quantified. *BMJ* 1995; **311**: 258.

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