

A healing curriculum

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CONTEXT The banner of patient-centredness flies over many academic institutions; however, the practice and teaching of medicine remain oriented to disease. This incongruence is the result of an original Flexnerian dichotomy between the basic and clinical sciences and is maintained by a more recent distinction between disease and illness. One mind-set emphasises basic science and pathology pedagogically, whilst clinical medicine becomes a search for disease. The second introduces the patient as the focal point, underlining the personal and social contexts of illness.

RESPONSE AT A CONCEPTUAL LEVEL We must orient ourselves to a single central theme, namely, the well-being of the individual patient. Doing so does not deny the importance of the scientific understanding of biological function. Indeed, recent advances in genetics may permit a richer view of the individual as a unique product of genetic, developmental and experiential forces. The foregoing provide a coherent framework for a scientifically guided and humanistic medicine, which replaces the false dichotomies that have plagued medical school curricula with a congruent and stereoscopic view of medical education.

RESPONSE AT A CURRICULAR LEVEL We describe an undergraduate programme, entitled 'Physicianship', based on the fundamental premise that healing is the doctor's primary obligation. Explicit training in a specific clinical method, whose cardinal features include observation, attentive listening and clinical reasoning, emphasises the knowledge and skills necessary to effect this theoretical framework. The understanding of illnesses emphasises loss of homeostasis, whereas the physical examination highlights

impairments of function. The educational experience is enriched with numerous opportunities for self-reflection.

KEYWORDS education, medical, undergraduate/*methods; curriculum; *professional practice; *physician's role; patient-centred care; physician-patient relations.

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'Although a clinician can be both a healer and a scientist, he cannot be an effective therapist if he merely joins these two roles in tandem by oscillating between them, adding laboratory science to bedside art. A clinician's objective in therapy is not just a conjunction, but a true synthesis of art and science, fusing the parts into a whole that unifies his work and makes his two roles one: a scientific healer... As a healer, the clinician's purpose is to treat the sick person, not merely the manifestation of disease.' Alvan Feinstein¹

INTRODUCTION

This essay describes a new undergraduate medical curriculum that redirects the medical student's gaze away from disease and towards the sick person. We present the conceptual framework, entitled 'Physicianship', and place it in historical context by contrasting it with other patient-centred approaches. We also describe the teaching of a clinical method intended to equip students with the tools required to assess, understand and heal sick persons.

HISTORICAL CONTEXT

A seminal event in medical education in North America was the publication of Abraham Flexner's

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Overview

What is already known on this subject

Traditional curricula, all generally derived from the original Flexner model, are inspired by and nurture classic dichotomies such as disease/illness, and basic science/clinical medicine. These are false and counter-productive to a coherent approach to medical education.

What this study adds

This essay recognises these various dualities but argues that medicine has but a single goal: to improve the well-being of a sick person, particularly in terms of function. It describes medicine's primary mandate as healing and recommends specific modifications to traditional curricular models.

Suggestions for further research

Evidence to support the effectiveness of the conceptual framework and the clinical method associated with it is currently being gathered.

report *'Medical Education in the USA and Canada'*.² Flexner perceived medical education to be bereft of a solid scientific foundation. His response was to propose a 2-phase curriculum, with scientific theory preceding clinical practice. An unintended consequence has been the nurturing of the sentiment, now prevalent, that there are 2 distinct sets of medical knowledge, the first rooted in science and scientific methodology, and the second, at times more difficult to define and delineate, linked to the delivery of clinical care. The recognition that this dichotomy is fundamentally counter-productive has generated the recurring desire to integrate these dual and parallel curricular strands and has guided curricular evolution over the past century. Flexner himself alluded to 2 categories:

'So far we have spoken explicitly of the fundamental sciences only. They furnish indeed, the essential instrumental basis of medical education. But the instrumental minimum can hardly serve as

the permanent professional minimum. It is even instrumentally inadequate. **The practitioner deals with facts of two categories.** Chemistry, physics, biology enable him to apprehend one set; he needs a different apperceptive and appreciative apparatus to deal with other, more subtle elements. Specific preparation is in this direction much more difficult; one must rely for the requisite insight and sympathy on a varied and enlarging cultural experience.'² [Emphasis added]

Flexner seems to have acknowledged an inherent limitation of scientific knowledge in fully equipping doctors to understand and take care of sick persons in their social worlds. Despite his cautionary note, the scientific thrust of his report was so dominant that, by mid-century, clinical aspects of the encounter between doctor and patient had virtually completely ceded centre stage to the teaching of the scientific foundations of medicine. The emphasis on science had come to occupy, not simply the foundation of the curricular edifice, but, increasingly, the upper stories as well.

A powerful alternative to the disease model found expression in the biopsychosocial approach proposed by Engel.³ The 'bio-psycho-social' model can be viewed as a systems-based hierarchy where the person (with unique characteristics, experiences and behaviours) is placed at the centre of a social organisation that begins with the individual's internal biochemical milieu and extends outward to encompass the family and community.⁴ This model, coupled with the experience of client-centred counselling,⁵ inspired a reform in the approach to the doctor-patient encounter, described as the patient-centred method.⁶ This has eclipsed the purely biomedical approach, although perhaps more so in teaching than in medical practice.

Descriptions of patient-centred programmes routinely identify a need to integrate the science of medicine with a focus on the patient. Many models have been adduced. One description shows a weaving, back and forth, between 2 strands: that of science and its pathophysiologic perspective of disease, and that of patients in all their human complexities⁷ (Fig. 1a). This approach is grounded in the distinction between illness and disease, as introduced by Cassell⁸ and illustrated by Reading⁹ (Fig. 1b). We believe, however, that, as important as the biopsychosocial approach has been in the evolution of our thinking, a medical pedagogy that considers its main task to be the integration of science with concern for the patient is left with a fundamental error. The

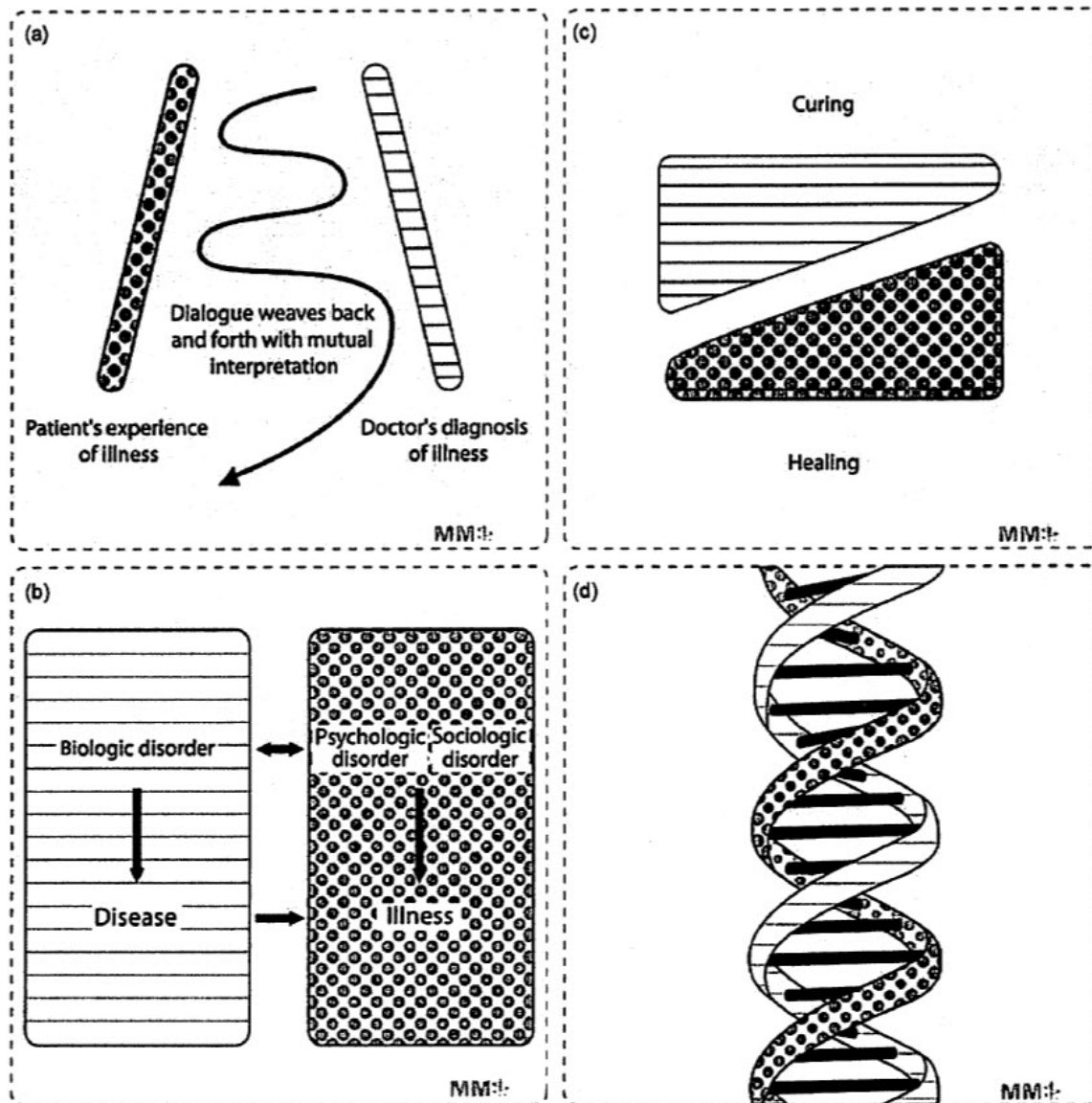


Figure 1 (a) Model showing dialogue between science and its pathophysiologic perspective of disease and patients (after McWhinney⁷). (b) Model showing the distinction between illness and disease (after Reading⁹). (c) Model showing the tension between curing and healing (after Milstein¹⁰). (d) Model using the structure of DNA to illustrate 2 strands of a curriculum, representing basic science and clinical medicine (after the University of Rochester School of Medicine and Dentistry¹¹).

problem does not lie in the fact that this construct recognises 2 kinds of knowledge – medical science and knowledge of patients – but, rather, in the fact that it suggests 2 separate goals. Indeed, it makes explicit the duality it seeks to eliminate. The first goal, the prevalent perspective of the last century, is focused on the scientific problem of disease and its pathophysiology. The second goal is focused on the human problem(s) of the patient. Many clinicians, particularly in the context of palliative care, have grappled with this tension by making a distinction between curing and healing – between abnormalities

of the body and those difficulties that arise from the patient's experience of those abnormalities (Fig. 1c). In this latter model, the 2 strands are attributed varying degrees of priority depending on the clinical situation – for example, healing is seen to predominate in end-of-life care.¹⁰ A final example of a patient-centred curriculum, again with split fields, has been described using a contemporary image, the structure of DNA (Fig. 1d). In the 'Double Helix Curriculum',¹¹ the 2 strands represent basic science and clinical medicine, although it is not clear what the 'rungs' represent.

Graphic representations and statements concerning the goals and values of medicine, as outlined above, are completely understandable from a historical viewpoint, but they fail to go beyond outdated dichotomies, many of which are rooted in Cartesian mind-body duality. These various dualisms and schisms have resulted in 2 sets of goals for thoughtful clinicians, namely, treating the body by eliminating or controlling the disease and moderating the patient's experience so that it is less overwhelming or intrusive on all aspects of life. The resultant gap is a source of confusion for medical students, who are likely to witness 2 apparently non-coherent perspectives.

We believe that there is only 1 goal – the wellbeing of the patient and, more specifically, improvement in the patient's functions to allow the patient to pursue his purposes. The integration of both the scientific and humane perspectives into a single stereoscopic image takes place within the doctor. The process is analogous to that which occurs in architects as they integrate engineering and aesthetic considerations within themselves into a single coherent goal.

Except as a taxonomic abstraction, there is no disease or illness separate from the patient; there is only the patient who is ill. The patient 'lives' the pathophysiology; it is manifest in a specific manner (phenotype) in that unique patient. This may not be as readily evident in acute diseases but it is obvious in the much more common chronic diseases. Thus, the onset, presentation, diagnosis, treatment and course of any single disease differ in different patients and are influenced by domains spanning the range from genetics, development and experience, to meaning-related psychodynamics.

SETTING AND CONTEXT OF CHANGE

Our own reflections on the curriculum at McGill University made it clear that we, like many other schools, engaged in curricular change every decade or so and in each instance, a major case was made for the integration of basic science and clinical teaching. The fact that this was a recurrent feature over many decades suggests that our past successes had been limited. An additional impetus for change was provided by the Association of American Medical Colleges (AAMC) when it issued a challenge for medical schools to update their clinical teaching.¹² Lastly, it became clear that tinkering at the margins would not have the intended impact. Hence, a curriculum review process, launched in 2004,

culminated in a proposal for realignment of the curriculum around the concept of the doctor as healer and professional, combining these facets of the intended 'product' under the rubric of 'physicianship'.¹³

EDUCATIONAL BLUEPRINT OF THE PHYSICIANSHIP CURRICULUM

Conceptual framework

'Physicianship' is not a word in common usage. The Oxford and Webster dictionaries define it in relation to the function(s) and role(s) of the physician. Cassell employed it approximately 2 decades ago¹⁴ and, more recently, a 'physicianship' evaluation form has been described in the context of assessing professional behaviours.¹⁵ Physicianship, as we understand it, is based on the following premise: the primary goal of medicine is healing. Healing encompasses the entire range of doctor-patient interactions, including treatments aimed at aberrant pathophysiologic mechanisms. Professionalism describes the requisite moral and behavioural attributes of doctors in all their guises, namely, as bedside clinicians, members of the profession, and members of the wider society.¹⁶

Healing has an honourable tradition. The word acquired the taint of quackery during the 20th century because it was used in a pejorative sense to discredit any medical effort not based completely on pathophysiological science. It is noteworthy that the *Oxford English Dictionary* lists the following definition for the word 'physician': 'A healer; a person who cures moral, spiritual, or political ills.'¹⁷ This is linguistic evidence that 'healing' has been connected to non-physical ailments and again reflects the duality described previously. Decades ago, when the distinction between disease and illness was proposed, the word 'curing' was used in reference to disease and 'healing' in reference to illness.⁸ We are of the opinion, however, that this dichotomy is artificial and counterproductive. In certain languages (e.g. French and Spanish), no distinction is made between curing and healing; these concepts are integrated within a single word (i.e. 'guérir' and 'curar', respectively), derived, like 'cure', from the word 'care'.

Some may be sceptical of the place of healing within medicine. Most would acknowledge, however, that the antithesis of healing may occur in any encounter and carries the potential to do considerable damage.

It has also been argued that healing may not be attributable to a 'healer'; that it depends on an innate potential within the patient.¹⁸ Should this interpretation be accurate, it would not detract from the fact that becoming 'whole' in serious or crippling sickness virtually always requires the help of others.

Healing is fundamentally individual and irreducibly personal. Clinicians know that, even when patients are ostensibly 'cured of disease', (e.g. when successful coronary artery revascularisation or successful treatment of a malignancy has taken place), significant impairments may continue: patients may not return to work, resume their place in the family, or function psychologically or socially as they did before becoming sick. Until patients are able to function, by meeting their goals within the boundaries of their capacities and impairments, sickness is not yet over. Even when a pathophysiological source is remedied, as in, for example, the relief of pain, suffering may continue unabated in the absence of additional healing interventions. Healing depends on the knowledge of both the manifestations of sickness and the nature of the particular patient. For example, a person with diabetes shares a specific molecular basis for disease with all other patients with diabetes. However, individual experiences of the disease will vary simply because the patient, like all persons, is different from all others in every aspect of his existence. Beyond that, moreover, not only the experience but also the expression of diabetes will be unique and particular in each individual.

Organisational framework

A programme that includes elements in each year of the medical curriculum is necessary if we are to shift the frame of reference to a new coherent vision of medical training, and by extension, of medical practice. In addition, certain elements must continue

in transverse fashion throughout the entire medical undergraduate experience in order to offer an integrated model of teaching and learning. The pedagogic goals and content of these elements are described in a later section of the paper. It may be useful, however, to first delineate the curricular units and settings within which these elements are delivered. The undergraduate medical curriculum at McGill University is 4 years in duration. The physicianship component consists of 5 physicianship courses and a mentorship programme called the 'Physician Apprenticeship'. A summary is presented in Table 1.

Educational objectives

The desired learning outcomes of the physicianship programme and the teaching modalities we have deployed to accomplish these are outlined in Table 2.

The first objective is to explicate to students the various capacities of the physician and to indicate that respect for and understanding of the healing function is a basic prerequisite for doctors who wish to place the patient's wellbeing at the centre of their work. A profound appreciation of the nature of suffering is required. The universal characteristics of serious sickness (e.g. disconnection from the surrounding world, vulnerability, failures of reasoning) as well as the more personal nature of suffering (e.g. loneliness, self-conflict, loss of purpose) are open to discovery through an adequate clinical method. They also represent specific opportunities for intervention. The doctor's basic tasks are to build a relationship, gather information and use that information to arrive at an understanding of the illness and its story, decipher the patient's understanding of his sickness, identify the patient's goals, plan and initiate treatment, estimate a prognosis, and

Table 1 Curricular units with primary responsibility for teaching Physicianship

<i>Course</i>	<i>Location in the 4-year programme</i>	<i>Pedagogic focus</i>
Physicianship 1	Year 1	Conceptual framework for physicianship; clinical observation; attentive listening; clinical thinking (and reasoning); bioethics; the professional role
Physicianship 2	Year 2	Communication skills
Physicianship 3	Year 2	Physical examination; critical appraisal and informed medical practice (i.e. evidence-based medicine)
Physicianship 4	Year 3	The healer role
Physicianship 5	Year 4	Advanced communication skills; medicine and society; professionalism and the social contract
Physician Apprenticeship	Years 1-4	Conceptual framework for physicianship; self-reflection

Table 2 List of specific objectives and teaching strategies

Elements	Learning outcomes	Teaching modalities
<i>Theoretical framework</i>		
Fundamental concepts	Define what is 'a person' Define health and healing Explain the nature of suffering ²⁴ Discuss the goals of healing ²⁵ Recite the cognitive basis and historical roots of professionalism	Assigned readings; didactic sessions followed by small-group interactions; written assignments; contact with a patient and family over a long period; discussions in the apprenticeship groups; required portfolio entries
<i>Clinical method</i>		
Clinical observation	Observe effectively and reliably, separating observation from interpretation, using a framework based on a modification of Berger's hierarchy of observation ²⁶	Student-led small groups using photographs and videos of patients
Attentive listening	Discuss the various roles of listening in the doctor-patient interaction Identify fundamental elements of language (spoken and non-verbal) ²⁷ Explain how language works to reveal a patient's emotions and relationships to self, illness, the doctor and others; demonstrate how this skill is used as a therapeutic tool	Student-led small groups using recorded conversations of actual doctor-patient encounters
Communication skills	Discuss the role of communication in healing Demonstrate the technique of interviewing using the Calgary-Cambridge approach ²⁸ Discover the trajectory from 'healthy' status to 'patient' status in a medical history and identify changes in function and its meaning	Introductory sessions are in didactic formats; students are then observed interviewing, progressing from role-plays to SPs and then actual patients; de-briefing and feedback is given by faculty, SPs and peers
Physical examination	Perform a complete physical examination assessing structural and physiologic abnormalities as well as a patient's capabilities in key aspects of personal function (physical, cognitive, emotional)	Students will learn basic skills by practising on themselves and will then progress to examining SPs and actual patients
Clinical thinking and reasoning	Explain the process doctors apply in formulating clinical problems underlining that clinical reasoning includes, but is not confined, to making a diagnosis Apply ethical principles Contrast different modes of inference (i.e. deduction, induction and abduction) and calculate conditional probabilities using a natural frequency approach ²⁹ Apply a simplified version of Bayesian theory using odds and likelihood ratios	Didactic sessions followed by small groups that are led by senior medical students; exercises use recorded doctor-patient encounters and SP encounters to practise the integration of observation, listening and thinking in simulated clinical environments
Written description (and documentation)	Write an accurate and valid description of the physical appearance, speech and behaviour of patients Document a case history using the revised template based on Donnelly ³⁰	Throughout the programme, students document their descriptions (e.g. of visual images, spoken language, patient interviews); particular attention is paid to the learner's ability to use evidence to draw inferences from appropriate observations
<i>Personal transformation</i>		
Narrative competence	Formulate a narrative perspective of the patient's illness highlighting the sources of meaning Demonstrate basic textual skills (e.g. identify tense, voice and common archetypes)	Students record entries in the portfolio; the written case report template includes a section on the patient perspective
Self-reflection	Participate in activities intended to foster insights into the impact of the transition to physicianhood on personal emotions, meanings and relationships Recognise personal values, biases, strengths and liabilities Acknowledge the importance of symbols and respect celebratory acts	Guided discussions in the apprenticeship meetings; use of the portfolio; participation in events underlining key transition points (e.g. the Donning the Healer's Habit [White Coat] Ceremony)

SP = standardised patient

report the data. It is through this relationship, developed with these objectives in mind, that the healer's role is effected. The specific skills necessary

to these ends are grouped under the rubric, the 'clinical method'.

The clinical method

It is only through an attempt to know the patient that one can engender the interpersonal respect necessary for the role of healer. Thus, bedside methods are not brought to bear simply in the search for a disease, but, rather, in order to know the patient and answer the cardinal question: 'Why did this particular individual (with his or her unique genetic, developmental, experiential and spiritual identities) come to visit me, the doctor, at this particular time?' Answering this question immediately accomplishes the 2 aims previously seen as disparate: that is, what is traditionally termed 'making a diagnosis' and being 'patient-centred'. These 2 goals are of a piece.

The toolbox of doctoring skills required is referred to as the 'clinical method'. Classic approaches to the clinical method, developed in the 19th century and little changed since, (with the notable exception of communication skills), and focused primarily on the search for disease, are inadequate for the teaching of physicianship. Consequently, we have introduced significant modifications in the clinical method taught under the rubric of physicianship. Thus, in Year 1, students are taught clinical observation, skilful listening, communication skills, and clinical reasoning. Physical examination is taught in Year 2 of the curriculum. Although these are described as separate, teachable entities, it is important to note that they are importantly inter-related.

Each element of the clinical method aims to equip the doctor to know his patient. Diagnostic efforts must be attuned to changes and impairments in the patient's functional capacity, as well as to morphological changes. Students must come away knowing the patient's goals, needs, concerns and preferences so that medical acts are ethically appropriate and reflect patient choices. Treatment is conceived as whatever is necessary to return the patient to as much function as possible, within the constraints of impairment and fate, and in relationship to the patient's perspective.

Description and narrative competence

The usual narrative record that is traditional in North American medicine hardly warrants the term 'history'. It is often a terse, epigrammatic and acronymic summary that concludes with a diagnosis or differential followed by suggestions for next steps and treatment. The mode of recording is clearly oriented to identifying a disease and is generally identified as belonging to a particular patient by the name-

stamp on the chart. Certainly, little within the file reflects the unique individual to whom it purportedly refers. In order to counter this trend, we have introduced teaching sessions and required assignments on written description and narrative competence. The new template for the case history requires the student to detail the trajectory from 'healthy' to 'patient', integrating the functional losses. The narrative perspective is different: it entails apprehending the patient's story of illness so as to provide insight into the patient's understanding of his situation, highlighting, in particular, the sources of meaning for that person.¹⁹ We teach the fundamental tasks in narrative competence – attention, representation, affiliation – and highlight basic textual skills such as understanding of tense, voice, common narrative archetypes and metaphors.

Transformation of the student

We consider that for effective healing, it is not only what the healer 'does' that is important, but also who the healer 'is'. Although it is often claimed that a disembodied science or technology makes the diagnosis and treats, it is clear that the doctor remains a requisite agent in clinical care. Many doctors actively avoid close knowledge of the sick – it is difficult, it appears to carry painful responsibility, and may be emotionally burdensome. The all too common admonishment to students to maintain a 'professional distance' is not acceptable. On the contrary, we expect that students will be actively immersed in such issues.

In order to provide the necessary perspective, permit time and opportunity for self-reflection and allow students to share the understandable angst and emotional turmoil that clinical care can entail, we have designed 2 strategies to provide appropriate emotional support while simultaneously promoting the values inherent to physicianship. A 4-year longitudinal course, the Physician Apprenticeship, is based on mentorship groups, each composed of 6 students, 1 senior student and 1 faculty member. Groups meet 6 times per year and provide a setting in which to explore the moral dimensions of medicine and reflect on the socialisation that occurs in medical school. Furthermore, these groups respond to an oft-expressed desire of students for a safe, non-judgmental environment in which to share their concerns, doubts and reactions about their early encounters with patients.

The second adjunct is the use of a personal (Physicianship) portfolio. Portfolios are collections of

materials that can be used for assessing learner progress and documenting personal development and insight.²⁰ Medical students are required to make entries to this portfolio that focus on their progress in acquiring the skills of the clinical method and on their transformation from layman to doctor.

CONCLUSIONS

The model of medical education described here rests on the fundamental belief that it is the uniqueness of the person that is central to the clinical enterprise. Sir William Osler argued consistently for the centrality of the patient in medicine:

'One element must always be taken into account in prognosis and that is the personal equation of the patient. No two cases of the same disease are ever exactly alike. The constitution of the person, his individuality, stamps each case with certain peculiarities.'²¹

Recognition of individuality confers epistemological and ethical demands. Science and technology are among the tools employed by a contemporary doctor and these must be taught. Indeed, patients have the right to assume the presence of technical expertise. The practice of medicine without scientific methodology would be false. There is, however, a need to teach new knowledge and skills. We have briefly outlined some of these; narrative competence may, for example, provide an entry to highly personalised care.²² The rapidly expanding field of genetics may provide a theoretical framework for the scientific basis of individuality.²³ The extent to which it will act in concert with or advance medicine's moral imperatives remains to be seen.

The subjectivity of the medical student is a key aspect of physicianship. That elusive entity, the 'self', is the central axis upon which the drama of clinical care revolves. The personhood of the patient and the doctor, and the relationship between them, are essential ingredients. Clinicians are not medical scientists – they are scientific healers. We believe this distinction to be important. It is our hope that this programme, as it continues to develop within the conceptual framework of physicianship, will represent the true synthesis of art and science expressed in Einstein's epigram at the beginning of this essay.

Contributors: this article is primarily a description of the conceptual framework for a new curriculum. All 3 authors

have been involved with the design and implementation of this curriculum from March 2004 (when the faculty's task force report on curricular renewal was finalised) to the present. All authors remain involved in ongoing curricular implementation and all are teachers on the programme. All 3 authors contributed significantly to the literature review, and the writing and editing of this article.

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