Reexamining the principles of medicine

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Commentary

Reexamining The Principles Of Medicine
by Samuel O. Thier

The medical profession has been remarkably successful in the past fifty years. In achieving this success, it has had to reach compromises with many of its fundamental principles. However, these compromises have become so important in providing stability to the system that the profession has come to protect them instead of the principles. Until we readdress those principles, we will drift farther from the purposes of the profession, putting at risk a social contract that is thousands of years old and upon which our respect and autonomy depend.

While medicine has been party to change before, no change has been as swift and cataclysmic as that taking place today in medical care organization and delivery. During this period, certain principles should guide the medical profession’s responses to the issues it faces. Fundamentally, medicine must behave as a learned profession if its social contract with society is to be maintained. To define this goal, I have modified Louis Brandeis’s definition of a profession to fit medicine.⁴ First, a learned profession is a keeper of a body of knowledge, a substantial portion of which derives from experience. Second, it is responsible for advancing that knowledge and transmitting it to the next generation. Third, it sets and enforces its own standards, and values performance above financial reward. And last, it is directed by a code of ethics that includes service to others. This Commentary will address how well medicine as a profession is performing relative to the principles embodied in this simple definition.

Medical Knowledge And Education

Medical education in this country is about a hundred years old.² Reforms began after the Civil War, a period during which medicine performed abysmally. A plan for the modern medical educational system was recognizable by the 1890s. The three principles of that educational revolution were simple. First, the science underlying medicine would be linked to practice. This link was achieved whenever possible by placing

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medical schools in the university setting. Second, the apprentice system
would be replaced by a supervised, organized, clinical education experi-
ence through which all graduates of medical schools would pass. Third,
whenever possible, medical schools would stress concepts rather than
simply teaching facts by rote.

Medical education based on these principles has been successful but is
in need of careful reexamination. Science and practice have changed
dramatically in the past century. The traditional organization of medical
schools into two years of basic science and two years of clinical studies
was a structure to implement the educational principles. Unfortunately,
this traditional organization has become a structural impediment in the
evolution of medical education.

At present, medical education can be conceptualized as comprising
these three levels of science: fundamental science, bridge or system
science, and clinical science. Fundamental science now comprises such
sciences as molecular and cell biology, biophysics; chemistry, and behav-
ioral sciences, which are not necessarily medical school sciences. Indeed,
they may equally well be university-based since they are important to all
life sciences. Now, may be the time to link medical schools more firmly,
via these fundamental sciences, to the parent universities. Two benefits
would derive from a more binding relationship: a greater sharing of
activities in the fundamental sciences could take place, and universities
could more readily nurture their medical schools. The nurture could be
both intellectual and protective. If in the next few years, for example,
National Institutes of Health (NIH) support of research declines or there
is less clinical income for medical schools, universities would have a real
stake in medical schools and would wish to preserve them rather than
allowing them to remain separate and wither.

In considering such change, we would have to determine how vigor-
ously we wish to protect the existing structure of our medical schools.
Such protection would come at the expense of the benefits medical
schools could derive by reaching out to the broader university scientific
community. Medical schools ought to consider not only greater sharing
of the fundamental sciences with the rest of the university but also
reemphasizing that such medical school-based sciences as pathology,
physiology, and immunology are bridge or system sciences. These sci-
ences would apply the methodologies of fundamental sciences in a
systems approach and would serve as a bridge between the fundamental
and clinical sciences. From the bridge sciences, where the clinical investi-
gators and the system and fundamental scientists would meet in my
model, the clinical scientists would bring basic insights back to the
bedside. Additionally, the model would bring public health and medi-
cine back together in the clinical sciences.

In this country, traditional medicine with a focus on mechanisms of
disease effectively cut off public health and its attention to epidemiological questions.\(^3\) Because of this separation, we in traditional medicine developed a clinical approach that was not couched in terms of society’s needs. Thus, in debates about the best use of health resources, we frequently lack data to defend our practices and to document their usefulness in a broad population. Public health, on the other hand, often had too little clinical perspective in its questions. Although beautifully designed to get statistical answers, the questions often had very little clinical relevance and were, therefore, ignored by traditional medicine.

These two cultures in our system must be merged. In my mind, clinical science is the merger of the two disciplines, and the joining together of public health and traditional medicine into a health science educational program will be necessary in the next few years. Without this merger, the voice of medicine will be weakened greatly in debates and decisions about the introduction, dissemination, and support of new medical technologies, procedures, and approaches.

The credibility of the medical profession can be further enhanced if we examine the numbers of medical students we wish to educate. That is a difficult issue. I believe we are on a trajectory similar to that which dentistry has already traveled. In the 1960s and 1970s, the dental profession did much the same thing we have done: they expanded from forty to sixty schools, while medicine went from eighty to approximately 120 schools. Now, because there no longer are enough qualified applicants to fill entering classes, dentistry is cutting the entering class back from 6,300 to 4,500 but is not closing a proportional number of schools. Rather than phasing out some lesser-quality institutions, they are cutting classes across the board, thus lowering the average quality of dental schools.

It is not too early for medicine to be facing those decisions. We are certainly training enough physicians. The last correction we made turned a perceived deficit of physicians into a massive excess in about ten years. I think we can readjust more slowly, but we must begin now. The medical profession as a whole could benefit from examining today’s situation as the surgical services did a few years ago, when they admitted frankly that they were training too many surgeons and began to make hard decisions about closing programs. It is the only positive example that I can recall in which we have controlled our own growth in medical education.

Lately, the level of humanity among medical students has received much attention. I do not believe that the interns, residents, and medical students that I have dealt with in the last twenty-five years are inhumane, not in the least. I believe that they are under tremendous pressures. The changes in the system that have occurred in the last ten years, such as putting more and sicker people into university hospitals, have made the situation more difficult. Concern about inhumanity and excessive scientific foundation of our interns, residents, and medical students, however,
is generations old, and although it requires constant attention, it is also evidence of medical advancement. When one stops hearing that new graduates are too scientific, it means the field is not advancing. Also, when one does not hear that there is more humanity in the person who has been in practice for ten or twenty years, then something is wrong with what that physician has learned over time.

Standards In Medicine

Another of the basic principles of a learned profession is that it sets its own standards and values performance above reward. The medical profession has evolved boards for certification, which have long served the purpose well. However, in recent years, the boards have at times descended into territorial disputes among the various medical specialties. They also have become a target of hospitals who view a change in standards as a possible change in operating costs. If physicians fail to guard their standards of practice, the growing corporate practice of medicine will gain control of the process. If that happens, the social contract held by our profession will be sundered.

It is in the area of financial compensation that the medical profession is most criticized by the public. When a patient is not given a colonoscopy because the insurance company pays only $100 instead of $500, are we, as physicians, saying that we would not do a procedure that was indicated because it was reimbursed at one level instead of another? If so, let us face ourselves and defend it; if not, we should not rationalize it.

We need to ask: What is the basis for colonoscopy reimbursed at $500, or for any technologic imperative that drives cost without necessarily driving improvement in health? Could we redistribute the payment for health care to bring more people care over a longer period of time—without tremendous impact on physicians’ incomes—by changing from a technologic imperative to a primary care and preventive imperative?

We also should be more professional in how we examine and evaluate what we do. That is, how do we measure the quality of the care that is delivered, both by physicians and by the system, and how do we deal with those circumstances in which the performance is not up to standard? There is no perfect quality assessment mechanism. If we argue that we will not introduce quality assessment unless it is perfect, then, simply, somebody else will impose assessment on the medical profession, and we again will have given up our professional responsibility.

Medical Ethics

The principles of the medical profession will be tested, perhaps as never before, as our commitment of service to others is challenged by the
limits being placed on resources and by the swelling number of elderly and medically indigent people. We may be running out of money, and we discuss limiting access to care. In the face of these challenges, we will have to ask how to provide equitable care to our aging population, and to grapple with the fact that Medicare in its present form, in my opinion, is doomed. We will not be able to continue Medicare by nibbling around the edges at a claims payment system that tries to address catastrophic care and ignores long-term care. To the extent that we as a profession do not speak out, we are not meeting our responsibilities. We must admit that we are supporting a system that will not serve the aging population of the next thirty years and that we will need to help reorganize and restructure that system. Also, we have a tradition in medicine of caring for the under- and uninsured. There is no reason to assume that physicians will not continue to include as part of their professional activity a service to the indigent and that the cost will not be shared by the hospitals and by society. There must be an equitable distribution of responsibility in this, with physicians taking an active part.

While medicine’s ethical standards require that we enter the debate about the future of medical care in an informed fashion, I caution that one cannot serve simultaneously as advocate and judge. A physician caring for a patient should not at the same time be making resource allocation judgments. That does not mean that medicine cannot bring its perspective and knowledge to the discussion of how society uses its resources. It only means that these roles must be separated so that physicians are always trusted to be undistracted advocates for their patients.

As we look to the future, I believe that the changes now occurring will go further. It will help nobody to agonize over these changes or to tell students not to enter medicine. There are many opportunities and possibilities that we should be grasping in medicine. Those that seek to preserve the status quo ought to examine what they are protecting and whether it is based upon the principles I have outlined or upon the fear of change. A reorganization, a rejoining, and a recommitment to the basic principles of advancing medical knowledge, transmitting it to the next generation, enforcing quality standards, and operating under a code of ethics that includes service to others, is essential. Also, a little idealism would not hurt as we face our continually evolving system of medicine.

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