The Physician And His Education

John E. Peterson
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JOHN E. PETERSON, M.D.**

Doctor Mateer, Ladies, and Gentlemen — you are most kind to have invited me to share in this happy occasion, and I am grateful for the honor of meeting with you and addressing you this evening. I should like to talk about the physician and his education.

In a statement¹ on objectives of undergraduate medical education, the Association of American Medical Colleges has proposed that medical schools should strive to help a student:

1) to acquire requisite knowledge, but also
2) to establish essential habits
3) to achieve basic skills
4) to develop sound attitudes, and
5) to gain understanding of professional and ethical principles.

Since education for a good physician never ends, I should like to propose that these objectives are worthy of continuing attention, and that we attempt this evening to explore rather briefly some of their meaning for the graduate physician.

KNOWLEDGE

Most resident physicians have an impressive store of information, but “knowledge does not keep much better than fish.” As Atchley² has stated it, the “professional growth of the physician depends on the way he has learned to use his mind rather than on what he was able to store in it during medical school.”

Concerning the information you have stored, one can be quite certain that some of what you know is untrue. More will soon be outdated; and there is a good bit about which one cannot be quite sure. Our dilemma is much like that of the king who says of his “puzzlement” in Oscar Hammerstein’s song, “In my head are many facts of which I wish I was more certain I was sure.”

What then is this requisite knowledge that one must have if he is to serve effectively as a physician? First, I would suggest that there is a body of general knowledge concerning man and his responses in health and disease for which the turnover rate is relatively slow. Secondly, there is also a mass of peripheral knowledge involving current notions on cause and treatment of disease. Here the turnover is quite rapid. Requisite knowledge includes some of each, but there is also another ingredient that is vital. This third ingredient involves an understanding of competence and of how one gathers knowledge for a specific task. Castle³ has stated that “competence is not necessarily ready in advance for a particular clinical situation but the right kind of knowledge knows how to become competent for almost

¹Graduation address, presented at Henry Ford Hospital June 6, 1960.
²Clinical Professor of Medicine and Assistant Dean, School of Medicine, College of Medical Evangelists, Loma Linda, California.
any situation.” He concludes that “the explorer in medicine, whether in the laboratory or at the bedside, must travel light. His ability to meet new circumstances successfully depends upon a knowledge of general principles and where to find the details of what more he may need to know.” This understanding of competence and how it may be acquired is a vital part of requisite knowledge. It is said of a teacher4 “if he is indeed wise he (a teacher) does not bid you enter the house of his wisdom but rather leads you to the threshold of your mind.” Competence suggests that one has made this journey to his own mind, that he has stepped across the threshold, and that he has learned to use effectively the equipment he has found inside.

For maintaining a core of requisite knowledge I would suggest that daily study is no luxury to be indulged if time permits. It is a necessity for the well-informed physician. Such study must be discriminating, however, for the physician will be deluged with data and he will need to “appraise the soundness of new information” and distinguish between the false and the true. In discussing the basic ingredients of a Liberal Education, Theodore Green5 has recommended that one “learn to recognize a fact when he encounters one, that he know how to test a claim to factuality, and that he know how to find available facts quickly, efficiently, and accurately when the need arises. Above all else, however, (he) needs to develop a passion for fact, a hunger for realism, a hatred for illusion and evasion.”

I would propose also that a physician should allow himself regularly the satisfaction of studying some subject in depth. If all one’s effort is devoted simply to skimming the literature in an effort at “keeping up” his mind will be forced to act as a sieve. Each of us needs periodically the experience of digging into something deeply. Time that is spent in pursuing some fact or concept to its source will pay a rich reward. If you have not had such experience recently — be sure to try it once again. This sort of digging will increase one’s competence and help to fashion a tougher mind. It will also add immeasurably to satisfaction.

HABIT

In order to maintain a requisite knowledge one needs to establish certain habits — habits of study, of thinking, of doing, of living, and of excellence.

If a physician is to study and think effectively he must cultivate the habit of curiosity. The ability to “wonder” — which has been defined as “doubt mingled with curiosity” is indispensable for learning. Little may come from wondering alone, but if this habit of wondering is coupled with the habit of disciplined action, one cannot help but learn and enlarge his understanding. I want to say more about the habit and the attitude of “wondering” but perhaps it will be appropriate first to say a bit about the habitual use of scientific method.

One physiologist has defined the scientific method as “simply using one’s head to solve problems,” but for most of us this approach to problems will require some discipline and training. The use of scientific method need not be limited to the laboratory. Its use can be habitual in every phase of life, and it can aid in all one’s tasks. It is well for us to remind ourselves that the use of scientific method
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for defining a problem, for the gathering and weighing of evidence, and for reaching a logical conclusion befits a clinician as well as a laboratory worker. Peabody has written that “a scientist is known not by his technical processes but by his intellectual processes; and the essence of the scientific method of thought is that it proceeds in an orderly manner toward the establishment of a truth.” It is this habitual use of scientific method which, according to Atchley, will distinguish the qualified physician from any of the “well-veneered practitioners of the healing arts,” who may dispense sympathy with skill but who lack scientific understanding.

Other habits which can be recommended are those of thoroughness and consideration. As resident physicians you have acquired certain good habits in the care of patients and in the approach to clinical problems of which, perhaps, you are hardly aware. Habituation of this sort is an essential part of resident training, and I think it important that one make a conscious effort to strengthen and continue it. Habits of thoroughness and accuracy, of courtesy, of kindness, of perceptiveness in the handling of patients — habits such as these are much better caught than taught, and one can be extremely grateful for the contagion that exists and has existed here.

Perhaps we should recognize also that phenomena of habit can be used for physiological as well as psychological advantage. Thus they may enable the physician himself to become more effective and a more efficient organism. A conscious effort to develop such habits and behaviour patterns thus becomes an important part of the continuum of education for a physician.

SKILLS

The skills required of a physician involve more than manual dexterity. Such dexterity may be of tremendous importance in certain types of work, but its importance does not exceed the importance of skill in such endeavors as drawing out a proper history, in performing a critical examination of the patient, or in the interpretation of findings in such a way as to give hope and understanding rather than fear and discouragement to the patient.

Skills of this sort may be rather painfully acquired. I still recall the acid comment made by one of the attendings here when I tried as an intern to excuse a poor examination by explaining that the patient was “uncooperative.” I was told with no uncertainty that a professional person had the responsibility for becoming skillful in dealing with such patients. He must not expect the patient to adapt to his limited abilities as a physician. Rather, he must equip himself to deal effectively with people and with problems as they are encountered.

I recall as well another occasion on which I displayed a similar lack of skill while attempting to interpret findings for a patient who was quite dependent upon a protective neurosis. This woman, the mother-in-law of a colleague, was referred for diagnosis. After a week of intensive study I assured her we had found no serious disease. I spoke with enthusiasm about the satisfaction she might draw from this assurance and from the therapeutic regimen to be prescribed.

In a moment it was evident how badly I had failed. She smiled weakly and
replied to my assurance, "I'll try to believe all this, but, doctor, I don't think you really know how sick I am." On returning to her home she was, of course, much worse for now she had again to convince her family of how "sick" she really was and of what a poor physician they had chosen. Fortunately her demonstration was shortened a bit by their agreement that they had in truth picked the wrong physician and by their selection of another who was more skillful in dealing with the situation.

The experience reminded me of Doctor Alvarez's story about the young farm hand who tried to plough a corn field with a pair of skittish mules. Foolishly he tied the reins about his waist. As they started out, the mules bolted and dragged the young man quite badly across the rough ground. At the hospital a few days later the farmer inquired, "Man, didn't you know better than to tie those reins about your waist?" The boy's reply would have been appropriate for me. He said, "You know, those mules hadn't gone ten feet before I knew I had done wrong."

I expect that each of you could recall some similar incident. The point I wish to make here is simply this. Acquisition of professional skill is a never-ending part of a physician's education. This skill involves inter-personal, relationships as well as manual dexterity. For some, the acquisition seems easy, but for others such skill comes hard. I am confident, however, that skill can be acquired when it is earnestly sought, and I am sure that you will have many rewarding experiences as well as the humbling sort that I have described.

ATTITUDES

The acquisition of knowledge, the establishment of habits, and the achievement of skills are seriously dependent upon underlying attitudes — "As a man thinketh in his heart, so is he" — and the attitudes which a physician cultivates and harbors tend to shape all that he will do.

Both the physician and his education will be affected adversely if he fails to develop sound attitudes, and I should like, therefore, to examine rather quickly a few of those attitudes which I think are essential for the growth and development of a competent physician.

If one is to be a student all his life he will need an attitude which has been described as a "burning yearning for learning." This involves more than the gathering of information and more than a desire for answers. I believe it will require that one cultivate an attitude of curiosity and of "wonderings." Such an attitude will enable one to see beyond the immediate and the urgent and to grapple with understanding. The curious mind will probe for understanding in every situation. Thus more facts will be observed and pondered and learning will result.

Unless a physician is curious and has a probing attitude of mind, it is not very likely that he will continue as a learner when he is no longer stimulated by examinations and the need for accreditation and licensure. Perhaps it is possible for one to carry on empirically without an attitude of "wondering" but learning will lag and he will hardly fulfill his promise as a physician.
A second attitude concerns that of viewing "each ill patient as a person with disordered development, structure, or function, the cause and cure of which are problems to be solved by means of careful scientific investigation." This involves more than the cataloging of disease and the manipulation of man and his environment. A clinician must be more than a medical "stamp-collector" if he is to find satisfaction in the care of patients.

The remarkable increase in technical and scientific knowledge requires a physician to have multiple concerns. The patient with pectoral pain is entitled to a critical study of his disease. His physician may take proper satisfaction in the precise diagnosis of an infarct of the myocardium. During a certain phase of his illness the patient may best be served by an apparent concentration of one's attention on the recognition and management of this serious disorder. But unless a physician can sometime sublimate his interest in myocardial infarction he will hardly be able to serve his patient properly throughout the course of illness. Despite much skill in the recognition and management of disease, one may fail as a physician if he is unable to balance his concern against the changing pattern of a patient's need. An essential quality for the clinician is an interest in humanity. To quote Peabody, "The secret of the care of the patient is in caring for the patient."

It is possible that we as teachers may contribute to the problem. The concern which a freshman student appears to have for people may at times seem crushed by the pressure to learn about disease and to accumulate more and still more information. When they are encountered, patients are often referred to as "teaching material" or as the "gallbladder in 314" and a gamesmanship is sometimes practiced in which a knowledge of disease rather than the patient appears to carry on the counters. An "attending" will exclaim with pride and enthusiasm about the "porphyria" or the "tetralogy" that he saw last evening and the rest of us are somewhat envious if we saw only patients who had "nothing wrong."

It is said of one teaching hospital that "the patient was made to understand that the doctors were interested not in him but in his disease, and the sooner he died and they could do an autopsy and study this beautiful disease the better." Perhaps the account is untrue and the meaning may be badly distorted, but the fact remains that patients and disease do seem at times to vie for a physician's interest and concern.

There are, of course, those with a different view. Just a few days ago an outstanding clinical teacher remarked in the course of discussion, "You know, I would not have much interest in disease if it did not have the bad habit of affecting people." I would not argue that everyone in a medical school or hospital should have such a view as this, but perhaps it is appropriate for clinicians. I am sure it will not surprise you to know that this particular doctor is eagerly sought by other physicians and their families when they themselves have need of care. I think it is also significant that this same physician is a favorite teacher and one who has made important contributions through research.

I relate all this to support the point that Peabody has made to the effect that "caring for the patient" is not incompatible with scientific endeavor. Compassionate
concern for the patient does not preclude a scientific approach to his trouble. Rather, I believe, the two are inseparably joined in the competent and qualified clinician. The wedding of these characteristics demands only that the patient's welfare be paramount.

One is naturally concerned as to how such attitudes develop, and a patient is said to have asked the question about where those "horrible students" go and where the "fine young doctors" come from. Perhaps the question does itself provide a clue. I suspect that the transformation begins when a physician acquires some sense of responsibility for the patient and his welfare.

In this connection, I recall a young physician here who once remarked that he could imagine nothing more boring than a ward full of diagnosed patients. Some time later, after practicing a bit, he published a challenging paper concerning a physician's responsibility for the whole man. All this is not to recommend that the development of one's attitude toward patients be left to time and chance. Rather, it is to suggest that by accepting and carrying responsibility for the patient as well as for the scientific management of his disease, a competent young scientist may facilitate the development in himself of the attitudes and habits of a capable and compassionate clinician.

In regard to one's attitude toward patients, I would like to say a word about respect. I doubt that a really satisfactory relationship can be established between a patient and his physician unless it is based on mutual respect. Early in my intern year I learned a useful lesson on this point. I encountered an elderly patient on the ward who told me that her chief complaint was "biliousness." As a very recent graduate I was sure that no such entity existed and I tried to display my superior knowledge by advising the patient there was no such disease. I can still recall how she froze me with a tolerant smile as if to say, "You poor dear boy, don't you even know about biliousness." It was evident at once that she had lost confidence in my professional ability and I think it is fair to state that I had lost some too. Because we spoke a different language, we each thought the other stupid and in our ignorance we each lost the other's confidence and respect. Fortunately, it was not long before I learned how easily to avoid such a misunderstanding. When next I encountered a patient with this complaint, I nodded knowingly and remarked to the effect that "biliousness" could, of course, appear in many forms — "just how is the sort that you have manifest?" I asked. The difference was magical. Rapport was strengthened in the exchange, and each of us gained a bit of understanding. The point I want to make is simply that mutual respect and confidence is necessary for a proper relationship between a patient and his physician. It is unfortunate if we, like children, judge the contents of a package by its wrappings, or if we allow differences in language, or custom, or dress, or education to diminish our perceptiveness and our regard for the patient as a person.

There is another attitude which I think has much to do with a physician and his education. This involves both science and art, and the attitude a physician has toward himself.
It is well for one to accept the fact that a "physician can cure sometimes, relieve often, prevent frequently, and comfort always." It is also well if he can assess his role in the complex relationship with patients and disease, with honesty and with understanding. Patients are likely to be a bit generous in estimating their own physician's knowledge and skill, and a proper attitude toward the science and the art will save a physician from taking such estimates at face value and of regarding himself more highly than he ought. If he fails to appreciate properly his role in dealing with sickness and with health he may with equal impropriety accept the credit for a patient's recovery or the blame for an unfavorable course.

The attitude that a physician cultivates toward himself is closely related to those that he will have toward medicine and toward patients. If he is proud and arrogant it will be difficult to maintain tolerance and a respect for those he serves. If he is selfish and self-centered he will find it hard to have genuine compassion and concern for others. As Dr. Roger I. Lee has put it, "honesty and courage a doctor must have and they are best tempered by humor and humility."

ETHICS

I should like now to say a bit about ethics. We physicians have long had codes for ethical behavior. The codes have changed a bit from time to time for they tend to reflect custom and culture as well as moral values. It is likely that all of us have taken some such pledge or oath at the time of graduation. Perhaps it was the oath of Hippocrates, or the Declaration of Geneva. What has this to do with a physician and his education? — I believe it has very much to do — for knowledge and skills are dependent on underlying attitudes and habits; and these in turn grow up from the ethical and moral values by which a person lives.

Sometimes it seems that the basis for ethical behavior is lost in the coding and I am, therefore, attracted by the simplicity and the authority of a statement which Matthew attributes to Jesus:

— One of them, which was a lawyer, asked Him a question — saying, Master, which is the great commandment in the law? Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. This is the first and great commandment. And the second is like unto it, Thou shalt love thy neighbor as thyself. On these two commandments hang all the law and the prophets.

Matt. 22:35-40

I believe that ethical behavior can depend on such a golden rule. A physician whose life is based on such a concept will cultivate compassion, conscientious concern, and a sincere desire to understand. As he seeks in an orderly manner to understand, he will gain not only knowledge but some appreciation of its significance and of its use. His search for understanding will lead to the achievement of competence and skill.
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For such a physician, education knows no end but there is satisfaction and many rich rewards. It is a prospect that I would wish for you.

BIBLIOGRAPHY