POSTGRADUATE EDUCATION WITH REFERENCE TO
ANESTHESIA

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In these stormy and controversial days, much is being said about
problems, real or imagined, in the general area of medicine as they relate
themselves to society at large. Particularly do we hear about difficul-
ties in the quantity and distribution of medical care, and in the eco-
nomic mechanism of the provision of adequate medical care. The fac-
tors of quantity and economics have tended to obscure far too often the
basic fact that the existence of medical care and the ability to buy it are
especially in vain if the care is not of the highest quality. The re-
search laboratories have put into the hands of the practitioners of
medicine in all fields, tools which are in a sense double-edged swords.
When applied with skill to a medical problem, these tools can be of
enormous diagnostic and therapeutic good. When applied carelessly
and without complete knowledge, these tools may reap havoc. There-
fore, it is incumbent on everyone who concerns himself with medicine
increasingly to orient his actions and thinking toward programs de-
dsigned to deliver to the American people not only adequate amounts of
medical care at a price which the people can pay but, perhaps above all
else, medical care of the very highest quality.

Quality in any endeavor depends basically upon two factors—educa-
tion and experience. Unlike the enigma of the priority of the
chicken or the egg, it seems clear that education must inevitably pre-
cede experience but it should also be obvious that neither alone suffices.
Modern medicine today represents a highly complex and integrated
body of facts, equipment and professional personnel. No longer is it
possible for high quality medicine to be taught by the simple mechanism
of throwing the swimmer into the stream and assuming that he will
gradually, on his own, learn how to swim.

We recognized this in undergraduate medical education seventy-
five years ago or more, and we have seen the development of the four-
year medical school with an organized curriculum integrating the medi-
ical sciences and their clinical applications. Whatever be the errors
and omissions of our present pattern of undergraduate medical educa-

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tion, and there are certainly many, the fact remains that the modern American medical school has provided the American public with a practitioner whose skill has effectively paralleled advance in medical knowledge and who, in my opinion, stands well in the forefront of his fellow practitioners over the globe. I wish to re-emphasize, therefore, that it is not just the roentgenogram, the various anesthetic gases and drugs, and all of the tools which the research scientists have handed to the practicing physician, but also the fact that these tools have been handed to a physician whose basic education has been so sound that he has been able to realize their potentialities for the great benefit of the consuming medical public.

Postgraduate education on the other hand has, not surprisingly, lagged behind as compared to the preliminary undergraduate program. It is, of course, an historical fact that our profession, perhaps more than any other, has always recognized and stated firmly the obligation of continued training by the active practitioner. The vast medical literature with its supporting journals and books represents a manifestation of this feeling on the part of physicians. The large numbers of professional and semiprofessional medical meetings held in every state and almost every county in this nation reflect this same attitude. The fact remains, however, that postgraduate medical education in this country in general remains as uncorrelated, as unintegrated, and perhaps as unrealistic as undergraduate medical education must have been in most parts of this country at the turn of the century. There are, of course, notable exceptions to this statement. In certain of the population centers of this country, particularly on the eastern seaboard, first-class, multi-purpose postgraduate educational programs have existed for many years and are increasingly being modified and expanded in the light of contemporary needs and demands.

Probably the first organized effort to formalize and organize postgraduate medical education for the demands of an increasing and complex body of medical knowledge was the establishment of the house officer or residency system. In order to obtain uniformity of standards, the various American Boards came into being with the commendable purpose of guaranteeing standards of this type of education. It is my opinion that it was quite unfortunate that the schools of medicine did not play an important role in the development of the American Board system but, as I read the history, this obligation did not go by usurpation but rather by default to the practicing profession. In other words, the schools of medicine had not fully recognized their obligations and apparently were still concerned with the four-year rather than the forty-year educational experience. In any event, the establishment of Board certification with the concomitant widespread development of the residency system in this country has unquestionably led to higher standards in medical care. Unfortunately, however, and this was probably to be expected, the American Board certification has
too often ceased being a means to the end of higher quality or performance but has become the end in itself. This facet of our educational problem is a complex one and well warrants a separate discussion. Suffice it to say that a dynamic, continuing educational program can be hampered and set into well-established ruts unless efforts are made to revise the concept that one has reached the millennium when he falls breathless and, in many instances, penniless in the arms of the American Board at an artificial finish-line.

Whether we believe it or not, semantics play an important psychological role in our thinking, and I have long thought that the term “postgraduate” is an unfortunate one because it does not typify the real objective in education for the graduated physician. The term that appeals most to me is “continuation education.” This term implies that regardless of our preliminary training or post-preliminary training, we have a continuing obligation to maintain our professional excellence and modify our skills to the changing body of medical knowledge. Continuation education reflects the feeling that the Board-certified specialist has not reached the end of the educational road when he hangs his framed certificate on his office wall. Continuation education, then, briefly stated, recognizes the obligation on the part of all physicians—teachers, certified specialists, men in general practice—continually to refresh and improve themselves academically and the obligation, on the other hand, of institutions concerned with medical education, whether they be medical schools or hospitals, with or without university connections, to design training programs with enthusiasm rather than reluctance, with realism rather than established patterns and clichés. It should be stated here parenthetically that a professor of medicine in a medical school can just as easily find himself in need of exposure to different points of view in technics as the man in general practice in the country. An academic rank carries many benefits with it but an automatic guarantee of continuing professional excellence is not one of them. In this connection we should remind ourselves that any training program, be it in medicine or other lines of endeavor, is no better than the leaders or instructors of the program. Vitality, freshness and adaptability to needs and demands are hallmarks of the successful academic formula. A lack of any one of these will tend to stifle and seriously compromise the success of the academic effort.

Application of the general principles stated to the subject of anesthesia requires an understanding of the function, purposes and needs of this particular discipline of general medicine. It has been my experience that a knowledge of the historical development of a subject often gives one better insight into the current requirements of that subject and although neither an historian nor an anesthesiologist, I should like to develop my theme in the light of the development of the speciality of anesthesia.
The history of medicine is replete with the efforts of mankind, or that particular group of men who set themselves up as the healers of mankind, to relieve pain. It has been only in relatively recent times that adequate and effective tools have been handed to the medical profession to resolve this problem. The important thing to remember, however, is that the original and basic justification for the birth of this speciality was in the main limited to the control of pain, particularly as it related to the surgical procedure. As the existence of effective anesthetic gases was discovered and the production of these agents made practical, the immediate result was an expansion and development of operative surgery. Quite naturally, then, there is every historical justification for the early development of anesthesiology as a handmaiden to surgery. As the experimental surgeon continued to probe the unknown and the untried, the complexities of surgical procedures increased and increasing demands were made upon the individual providing the anesthesia. Improvement of the surgical technic demanded, that the surgeon advise with the early anesthesiologist in matters other than the simple delivery of an anesthetic gaseous mixture. Physicians generally began to sense that the patient was a total organism and that the complete surgical procedure should consist of evaluation and preparation of the patient, blood loss, the delivery and distribution in the body of gases other than the anesthetic agent, the postoperative course, all as well as the actual operation. In spite of themselves, surgeon and anesthetist were becoming physiologists, and today we accept as axiomatic that the best surgeon and the best anesthetist are the best clinical physiologists. As a part of this development, the surgeon, rejoicing in his lower mortalities and morbidities, in his ability to correct and cure more and more fundamental medical problems, began demanding more than just a technician to administer a gaseous mixture. He recognized that the resolution of a ticklish surgical problem represented not the maestro with his band of aides but rather a team in which he was simply a co-equal member. But he also found to his chagrin that skilled members of this team were difficult to find, not in the least measure because of the fact that in the breast of each one of us exists the desire for recognition, the desire for co-equal participation. Finally the profession at large has realized that if a well-balanced team were to be developed, students in the medical school and young graduating physicians should recognize the fact that this surgical team was made up of not just left halfbacks but skilled blockers and tacklers as well. Suffice it to say, then, that at the present time those of our profession who are honestly interested in the provision of higher quality medical care for the public recognize that at the head of every operating table there must sit an individual with good fundamental medical training, steeped in the knowledge of the basic mechanics of the human body and given the responsibility to evaluate, advise and direct in various phases of patient care. We further understand that around this
table stands a team, each member doing his or her own essential part in handling the problem of human disease in terms of the total patient.

Such, then, is the ideal type of person whom the educators would hope to develop for the growing ranks of the speciality of anesthesiology. I have neither the time nor the obligation to consider the undergraduate development of this person. What are the needs of postgraduate training for this brand of applied physiologist?

In the first place, we must recognize that we are way behind in the production of such skilled people and that society will not permit, even if it were seriously contemplated, a sharp reduction in the number of operative procedures in this country until such a time as we have a trained anesthesiologist to participate in each one of them. As we all know, in every state in this country some men and women are giving anesthetics with very little if any special education in this field. They are busy men and women who have had brought to bear on them the pressure of performing a necessary job, and many of them are doing it quite well. The problem now is not to carp and criticize the existence and the actions of such people but rather to accept, with the full credit due them, the essential work that they are doing and to provide for them realistic training experiences in the institutions where such experiences can be effectively delivered. In other words, throughout this entire country, hospitals should recognize that their major continuation teaching obligation is not only to the resident in anesthesiology but at present, at least, just an importantly to the individual whom I have described. These physicians should be encouraged to come to the various hospitals where qualified and skilled anesthesiologists are in charge, not for three-day didactic demonstration courses but for periods of from several weeks to several months. One often hears it said that such a program would "interfere" with a smoothly organized resident training program and the general operation of the hospital. Those who hold to such a doctrine are denying their fundamental obligation as trained physicians. They are taking the line of least resistance and hiding their disinterest and their lack of vision behind the very convenient cloak that many physicians utilize as needed, namely, the lack of time and the pressures of the medical needs of the population. I would prefer to say let not the resident training program interfere with the very fundamental obligation to provide for continuous training for those who are already doing the job in the field. In a well-organized program with broad participation and vision, neither type of training program need compromise the other. Both types of training programs can exist with mutual benefit to each other. It should further be noted at this point that the university-type hospitals represent only a small segment of the potentially available areas for this type of training.

In the great midwestern plains country, it is quite unlikely that in the near future, or perhaps ever, trained specialists in anesthesiology
will be available to provide anesthetics for all surgical procedures. It is for that reason, therefore, that we are giving special consideration and emphasis to this program of so-called "in-resident" type training for the man in general practice who, in addition to some of his responsibilities, will specifically have the responsibility of anesthesia. In many parts of this country, perhaps in every state in the nation, noncertified men will be delivering babies, taking out appendixes, treating diabetes, giving anesthetics, for many years to come. All of these people if they have been properly indoctrinated during the first four years of their educational experience will seek the opportunity to return to centers where programs are available to provide the means of continually maintaining and improving their skills in performing their duties. Between the three-day refresher course for the practicing physician on the one hand and the three-year residency training for the young graduated physician on the other lies the greatest obligation, the greatest necessity, and potentially the greatest opportunity in the whole field of postgraduate medical education. I need not tell this group, who are actually better qualified than I in the field, what type of a resident training program is needed. We have alluded to the necessity of making the trained anesthesiologist in fact an applied clinical physiologist. Furthermore, the three-day refresher course or the five-day medical meeting needs no further elucidation. They have been qualitatively developed to the maximum, needing perhaps only an increase in number and better distribution to achieve their most complete effectiveness. It is with the vast group of men and women in the general practice of medicine which I at present and for some time have been concerned. In this group we find most of the people who are delivering medical care to the American public today, and I am sure that such will be the case twenty years hence. It is for these people particularly that the hospitals and the schools of medicine must provide a fundamentally sound, useful and interesting program of education. It is with this group of people and it is in this area of effort that the whole educational pattern in American medicine can be revitalized and applied with enormous potential benefit, both to the profession and to the public. I believe that many of the anesthesiologist's colleagues in general practice who are providing anesthesia for surgical patients would welcome, in fact, petition for the opportunity to participate in such programs. The American Academy of General Practice has as one of its requirements for continued membership a definite amount of biannual postgraduate education. Every hospital where one or more trained anesthesiologists exists is a potential school for this in-resident type training for the man in general practice. Whether the man can participate in a three-months' program, a six-months' program, or a year's program is relatively beside the point. The presence or absence of a certificate with which we sometimes seek to impress our erudition upon our patients is beside the point. The certificate, the
Board, the formula, the school, all must be secondary to the principle of those qualified providing the opportunity for those who wish to improve their knowledge for the ultimate benefit of the public.

I am not worried about the stature of anesthesiology as a specialty. It exists today as a recognized scientific discipline in medicine. I am not so worried about the development of resident training programs in anesthesiology. The record shows their increase in number and, for reasons which I shall not detail, I am confident that increasing numbers of young physicians will seek training in these residency programs. Anesthesiology now wears the badge of American Board certification, whatever that has come to mean. I believe that this Society should make and increasingly concern itself with changes in the academic formula but recognize that the academic formula, if it has any value at all, must be in direct liaison with the needs of the consuming medical public. This Society exists to exert leadership in the effort to improve the standards of medical practice as they relate to anesthesiology. I submit, therefore, in addition to the various commendable interests in the field of education and anesthesiology, that the anesthesiologist increasingly strive to establish and develop programs designed to satisfy the requirements and the needs in a realistic and effective way for that large group of physicians on whom 80 per cent of the American people depend for the resolution of their medical problems. In this effort, I feel confident, the anesthesiologist will have the enlightened support and backing of the schools of medicine and the various groups of specialties which bear on the problem of anesthesiology. In such an effort surely the American people can be made fully aware of the interest of the American medical profession not only in the quantity, distribution, and economics of their medical care but in that all-important factor, continued higher quality.