

Editorial Views

Let's Set Our Sights

ALMOST every specialty, including our own, is beginning to come to grips with mounting needs for medical personnel adequate to meet the requirements of a rapidly expanding population. An explosive birth rate and advances in therapy have increased the caseload. Technical advances in surgery and development of surgical specialties have altered profoundly the practice of anesthesiology since World War II. The establishment of many new hospitals has increased our burden. There is a need for a re-evaluation of methods of practice, teaching and research.

We must guard against oversimplification of a national problem which to date has defied solution. The 1961 Congress, in its charge to the Public Health Service, pointed out that "in 1957-58, there were 10 million operations including 4 million obstetrical deliveries, 1 person in every 15 of the population was anesthetized for a surgical operation. Yet, despite the large number of people subjected to anesthesia, there is a critical shortage of personnel to administer anesthetics, to teach the science of anesthesia, and to conduct research in this field."

Congress attempted, over a century ago, to honor the discoverer of anesthesia. Although this resulted in tragedy to the contending aspirants, it is encouraging that Congressional concern with our specialty continues even now that the problems of anesthesia are vastly more complex. Congress is aware of the needs of anesthesiology. Two of our colleagues have appeared before a Congressional Committee on Appropriations to petition that adequate funds be allocated for research and training in anesthesiology. It is heartening that the Senate Committee on Labor-Health, Education, and Welfare Appropriations directed "that the Division give special attention to the training of research anesthesiologists and to the support of scientific research project and program grants in anesthesiology."

We are facing problems which transcend the relatively narrow limits of professional interests. The problem is to provide safe anes-

thesia for everybody. Should we consider ourselves our brother's keeper? Indeed, we are his keeper when he is anesthetized! The magnitude of the problem of administering safe anesthesia is evidenced by the results of a survey in ten university hospitals which demonstrated an anesthetic death rate of 1 in 1,560. This would mean at least 6,000 anesthetic deaths a year in the United States. The fatality rate in obstetrical anesthesia has been estimated between 2,000 and 6,000 per year. An additional 24,000 operative deaths occur annually, some of which conceivably could have been avoided by improved anesthetic management. It is apparent from such figures that a substantial public health problem exists. Efforts to train expert anesthesiologists must continue ceaselessly.

Directors of departments of the surgical specialties might consider which of their residents are particularly qualified for a career in anesthesiology. Such applicants should be directed into the field of anesthesiology. Perhaps, we have been at fault in not urging that educators stress the importance of anesthesiology as a specialty so that medical students may be attracted to this field.

Modern anesthesiology is actually applied physiology and pharmacology. The field is one for active minds. The age of the "ether dropper" is long since gone. The confines of human physiology and pharmacology are daily expanded. Biochemical materials constitute a vast sea of substances, many of which have not been explored or explained fully. The host of compounds constructed by molecular chemists and their effects in producing analgesia, narcosis, tranquility, and obviating side effects are difficult to assay accurately. There is as vast a field of exploration here as the galaxies which intrigue space scientists. The clinical anesthesiologist does his best when he works in the light of knowledge obtained in the basic sciences. He constantly applies this background during his administration of anesthesia to the patients. Let us proselyte to

the end that we will attract to our profession men interested in practicing the applied pharmacology of anesthesia.

There are other aspects which merit our attention. Not long ago in an address at the seventy-second annual meeting of the Association of American Medical Colleges, Dr. George E. Miller, the Director of Research in Medical Education at the University of Illinois College of Medicine, pleaded that medical educators should take a new look at their preconceived notions of time to be spent in preparation for a specialty. Attention should be directed at learning rather than teaching. The American Board of Anesthesiology has done some intensive soul searching in trying to equate their certification procedures with the evidence that the candidate has learned. We need to evolve methods by which we can measure the more complex cognitive levels to determine what the physician retains permanently.

What should be the role of the Board Certificate in hospital appointments and promotions? Queries by hospitals and complaints by Society members directed to our Executive Office indicate that, on occasions, certification has been used, or misused, in connection with staff appointments. There should be definition by the Boards to place their certification in clear perspective. Possibly we should evaluate knowledge acquired by means other than solely by academic bookkeeping.

We need to re-examine our American College in this connection. Inasmuch as there is an American Board of Anesthesiology, the sphere of the American College should be different and should not require a repetitive

certifying procedure. To my knowledge no other specialty has dual certification.

We should intensify the use of the advice of the Council on Medical Education and Hospitals of the American Medical Association and the Residency Review Committee. We should encourage closer connections between organizations such as the American Board of Anesthesiology, the Association of University Anesthetists, the Academy of Anesthesiology, the International Research Society and the World Federation of Societies of Anaesthesiologists. We have the opportunity to lead the way for other specialties to adopt the same methods of close coordination in their groups which may in the future extend to a closer coordination between all specialties.

This is the time for our Society to establish a study to explore the future course of our specialty. To this end, I will propose that the Society underwrite a three year study; that a full-time director and field staff be appointed. This study would gather and correlate all available information in the areas of practice, teaching and research. It would make appropriate recommendations for necessary changes. Let us set our sights high, so that we may develop better teachers, spur broader investigation, and attract the best qualified physicians into our specialty. The coalescence of these functions will surely improve the quality of care and ensure the safety of the patients entrusted to us.

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The Design of Experiments Evaluating Analgesics

MANY physicians participate in clinical studies evaluating analgesic drugs. Frequently the published reports of these investigations are contradictory. The most important cause of confusion is failure of the investigators and of the readers to appreciate the importance of differences in experimental design. In any study of analgesics, methodology is of paramount importance.

Subjects for Analgesic Tests. The use of

pathological pain seems superior to experimental pain for testing purposes. In humans pain threshold determinations are altered by distraction (lack of attention), fatigue, and other factors. The subjects which are suitable may be categorized on the basis of the expected duration of pain as follows: (1) patients with chronic painful diseases and (2) patients with acute painful conditions.

The Cross-Over Method. The cross-over