A unique opportunity
to evaluate your surgical knowledge

The Surgical Education and Self-Assessment Program

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It is generally conceded that the “half life” of medical knowledge is between five and ten years. At the end of that period appreciable medical information currently in use will be demonstrated to be incomplete or incorrect, or will have been superseded by new information. It is for this reason that a major portion of a physician’s effort is devoted to a continuing program of self education throughout his professional career. The acquisition and expansion of his knowledge is accomplished through reading of scholarly journals, attendance at regional and national medical meetings, participation in study and journal clubs, and the taking of formal postgraduate courses offered by universities and professional societies. There is no other profession whose members can be more appropriately considered “life-long students”.

With the increased affluence and sophistication of society, the consumer is progressively more concerned with assuring himself, through governmental regulation, of the quality and dependability of the goods and services he purchases. This is particularly true where his safety and welfare are concerned. Regulations governing public transportation, public utilities, and building codes are examples of how society regulates itself to provide this assurance. It is interesting that the regulation of the professions has been largely through a one-time certification and licensure which is presumed to attest to the individual’s competence throughout his career. An exception to this generalization are the regulations governing the competence and continuing education of commercial pilots. In this field, the federal government continuously determines, by a program of recertification and re-licensure throughout the pilot’s career, that he is physically and technically competent. The report of the Millis Commission recommended that consideration be given to a program which would assure the medical consumer that his physician maintains his professional competence. Considerable interest in implementing this recommendation has been demonstrated at both the state and federal governmental levels.

It is recognized that a specialist in medicine, as represented by Fellows of the ACS, cannot and need not know the complete body of medical knowledge. Within each individual’s needs is a requirement unique to his activities and best judged by himself. There is a need for assessment of knowledge; and some community planners have suggested re-licensure or recertification. Regardless of the future requirements, there is little possibility of any surgeon being deprived of the opportunity to practice his skills at a time when medical manpower
does not meet the demands of sick patients. Some assistance is offered to the practicing surgeon in determining his knowledge, both broad and specialized, in surgery as compiled by a broadly based peer group of clinical surgeons. Forty-four specialists were chosen in these fields—chosen broadly to cover general surgery which comprises 50 percent of the membership of the College, and other specialties, including obstetrics and gynecology, orthopedics and urology which make up more than half of the remainder.

It is actually quite anomalous that a profession so intimately responsible for human health and welfare should be essentially free of the concept of re-certification and re-licensure at the present time. This freedom from obligatory postgraduate education is a tribute to a profession whose members have, on a voluntary basis, so conscientiously continued their educational efforts following certification and licensure.

**Minimum vs. ideal standards**

It is historically true that regulation of professional activities by governmental fiat establishes only minimum standards. In a profession where human health and welfare are the principal objectives, we are concerned with a uniform rather than minimal level of excellence. To this end, the College has always considered one of its primary missions to be education. The dissemination of knowledge to the Fellowship is accomplished through the scientific programs of the Clinical Congress, formal postgraduate courses, programs of the sectional and chapter meetings, and through the official publications of the College.

An admitted deficiency of the program of the College, as well as of other professional societies, is the inability of the individual practitioner to identify those areas of weakness in his medical knowledge requiring remedial educational activity. How does the surgeon know if his knowledge of the most recent advances in cardiovascular physiology is sufficient? Is he aware of recent advances in other surgical specialties which might affect the care of patients in his own specialty? In order to achieve maximum benefit of his educational effort, it is necessary for the physician to identify precisely those areas of medical knowledge in which he has failed to keep up with his peers.

Many surgeons have no continuing program of well-organized study and some do not regularly attend scientific meetings or clinical courses, or by selective reading keep abreast of new techniques and knowledge. The effectiveness of such activities can only be more sharply
focused for the surgeon who evaluates his own information aided by the selection of what others in his, or a closely related, specialty believe to be useful knowledge.

Recognition of this defect in postgraduate medical education has led to the concept of the voluntary self-assessment examination. Several professional societies have already developed examinations which are voluntary, self-administered, and permit the physician to evaluate his own medical knowledge. Each physician should be able to determine his need for specific knowledge in special areas. The questions with a bibliography for reference reading are designed to cover basic material and are thought to be of value to all surgeons. Obviously practical limitations restrict the scope so that all the ambiguities cannot be eliminated nor can all the areas be completely covered, but the breadth of the material and the depth of the inter-related knowledge surveyed should compensate for these inevitable omissions. Some questions will be answered correctly by most and others by only a few surgeons in an attempt to give a better measurement of basic and new knowledge in special areas.

SESAP-Surgical Education and Self-Assessment Program

Under the auspices of the Committee on Continuing Education, the College, in cooperation with the National Board of Medical Examiners, is developing a self-assessment examination for the general surgeon and surgical specialist. Nationally recognized leaders in the fields of general and specialty surgery have generously donated their time to the construction of the program. It consists of 750 clinically-oriented objective questions covering the broad field of surgery, and is better described as an “educational and self-assessment exercise” than as an “examination”. The questions emphasize new information which may have been developed since the practicing surgeon completed his residency five, ten, or more years ago. The evaluation covers that body of surgical knowledge which is essential to all surgeons, whether generalists or specialists. No attempt is made to examine in depth the individual specialty areas.

The seven categories of the program are:

1. Cardiovascular and respiratory.
2. Musculoskeletal and neurosurgery.
3. Skin, breast, and burns.
5. Genitourinary and gynecology.
7. Head, neck, ear, nose, throat, and ophthalmology.
In addition, questions on cancer and trauma are distributed throughout the seven categories, and will be evaluated separately. Thus, the program will assess the surgeon’s knowledge in nine areas.

**SESAP and the specialist**

The typical surgical specialist has little difficulty in keeping abreast of new discoveries in his own field because of the nature of the literature he reads and the meetings he attends. In contrast, he has little opportunity to learn of new advances in other specialties which might affect the clinical management of patients in his own specialty. There is a certain body of knowledge which must be possessed by all surgeons if they are to administer competent clinical care. Thus, the ophthalmologist who employs general anesthesia must be aware of the recently discovered occurrence of high output renal failure following methoxyflurane anesthesia, or he would be unable to recognize the syndrome when he encounters it in one of his patients. The urologist must be aware of the recent advances in the use of steroids for the treatment of cerebral edema, since anesthetic accidents and patients with cerebral trauma are not uncommon in his specialty. The general surgeon should be thoroughly familiar with the use of the new positive inotropic agents if he is to achieve the high rate of resuscitation from circulatory collapse which is accomplished by the thoracic surgeon.

SESAP is not an in-depth assessment of knowledge in the specialty fields. Such a detailed evaluation might be the subject of a future program by the College or, more likely, by the individual specialty groups.

**Scoring**

Since this is not an examination, but a self-assessment, there is no passing or failing score. Rather, the effort is to provide the individual surgeon an evaluation of his knowledge in nine specific areas of knowledge. The evaluation will be made, both in relation to the entire group participating in the program, and in relation to those in the individual’s own specialty. It is quite likely that urologists would do relatively poorly in Category 3 (skin, breast, and burns) when compared to the entire group, since half of the members of the College are general surgeons and would be quite familiar with new knowledge in this field. On the other hand, a urologist who does poorly in Category 3, when compared to other urologists, might consider himself too isolated in his specialty practice and in need of broader educational exposure to better practice his own specialty.

It is expected that the surgical knowledge of those participating in the program will vary according to a normal frequency distribution curve, i.e., the greatest number of surgeons will achieve similar scores, a few will be outstandingly high, and a few very low. The most meaningful way of reporting the results of the self-assessment will, therefore, be in terms of the surgeon’s performance in relation to the performance of his peers. The decile rating system will be employed.

Those who score high and close to the mean of the group will feel that their knowledge in a specific categorical area is such that they are capable of providing good clinical care. Those who score in the lowest 10 to 20 percent of their peers in their own specialty may well interpret this as reflecting a need for additional education effort in a specific area of knowledge. It is anticipated that the College will provide at its future Clinical Congresses and sectional meetings, and perhaps in conjunction with universities, remedial postgraduate courses for those seeking to correct deficiencies demonstrated by the self-assessment program.

All answers to the objective type questions will be indicated on a special answer sheet which can be machine-scored. The availability of modern computer techniques makes it possible to provide the individual surgeon with a
Special care is necessary in interpreting this report because of its evaluation on the basis of one's specialty peers. For example, the individual is an otorhinolaryngologist, and yet ranked only in the 6th decile in Category 7. This is not unexpected. He may well have performed in the best 10 percent of the entire group in Category 7 because of his special knowledge in the field of otorhinolaryngology. However, since the decile rating is made only in relation to other people in the same specialty, the 6th decile ranking indicates he performed as well as the average otorhinolaryngologist. On the other hand, his ranking in the 9th decile in gastrointestinal surgery does not indicate his competence to practice this specialty. Rather, it simply shows that his knowledge of gastrointestinal surgery is far better than the knowledge in this category of other otorhinolaryngologists. The computer-stored critique has properly suggested his need for postgraduate education in metabolic, shock and endocrine surgery, since he does not possess the same factual knowledge in this field as other surgeons practicing otorhinolaryngology.

Self-evaluation vs. self-education

SESAP is designed to be used, at the surgeon's option, either as an evaluation of knowledge or as an educational tool. The question booklets are divided into the subject categories indicated. It is recommended that the self-assessment program be taken in private during leisure time without frequent interruptions and at the individual's own pace. At the end of each category is a series of bibliographic references to both standard text books and recent surgical literature, giving the appropriate reference material for each question. The individual thus has two options. He may take the self-evaluation, then receive with his scoring report the answer key. Using the references provided, he

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may, by appropriate study, compensate for the deficiencies in his knowledge. On the other hand, he may elect to take an “open book” examination. When he comes to questions to which he does not know the answer, he may use the reference material to seek the correct answer before marking the answer sheet. Since the purpose of SESAP is education, not examination, the surgeon will with either option have accomplished the objective of the program.

Those who use reference material or consultation with colleagues to answer questions will be asked to so indicate at the end of the examination. The examination results of these individuals will then be eliminated by the computer before computing the performance of individuals in various specialty groups. Thus, those who use the program for self-evaluation can be assured that they will be compared only with others who also answered the questions on a “closed book” basis.

**Evaluating clinical competence**

Those who are knowledgeable in the field of testing in medical education are fully aware of the limitations in attempting to obtain reliable measures of competence. Clinical competence is a combination of 1) knowledge, 2) clinical experience, 3) technical skill, and 4) a certain intangible characteristic of the human mind related to pattern recognition and the decision-making process. Clinical experience, technical skill, and the intangible qualities of the human mind are not readily measurable. It is quite possible that a group of surgical residents might perform better than a group of highly competent surgical practitioners. Although the overall clinical competence of the surgical residents may be inferior, their surgical knowledge may be superior. SESAP might indicate that the surgical practitioners, although having great clinical competence, are not keeping up with the latest advances in surgery. Because of this deficient knowledge, they are not providing the high level of clinical care to their patients which their clinical experience and technical skill make them capable of.

The Surgical Education and Self-Assessment Program is a test of knowledge, not of clinical competence. However, given two surgeons with equal clinical experience, technical skill, and clinical acumen, the one who performs better on a test of surgical knowledge can be expected to provide better clinical care to his patients.

The committees have functioned under the belief that each man has his own profile of special knowledge and the need for such knowledge to fit his experience and requirements for the practice of clinical surgery is best known to himself. To each physician electing to take the program goes a recognition of his dedication to insure better care by determining his profile of clinical knowledge.

**Confidentiality**

Since lay individuals could not be expected to understand the foregoing differences between a test of knowledge and a test of clinical competence, it is essential that there be absolute confidentiality in the handling of the self-assessment program. The National Board of Medical Examiners has an unblemished record for maintaining confidentiality in the handling of its testing program over a period of decades. Even greater protection of the confidentiality of SESAP will be provided by the use of a bonded agency. The National Board of Medical Examiners will have only the answer sheets, and grades coded only by an identification number. Only the bonded agency will have both the identification number and the individual surgeon’s name and address. The bonded agency will serve to correlate the assessment results provided by the National Board of Medical Examiners with the name and address of the surgeon. The evaluation scores on the individual surgeon will not be available to the American College of Surgeons or to the National Board of Medical Examiners.

Collated scores for both specialty groups and for categorical areas of knowledge will be available to the College to enable it to prepare the postgraduate educational courses which would be of greatest benefit to those participating in the program.

**Mechanics of the program**

The program is open to all doctors of medicine, including residents in training. Requests for a prospectus and application should be directed to SESAP, American College of Surgeons, 55 E. Erie Street, Chicago Illinois 60611 (editor’s note: A postage paid card for this purpose can be found between pages 8 and 9). A prospectus and application will be sent by mail. The application is returned with a check directly to the bonded agency. The cost for the program is $35.00 for Fellows, members of the Candidate Group, and residents, and $60.00 for nonfellows.
Included with the application are two mailing labels which will be filled out by the surgeon. One of these will be used to direct the question books and answer sheets back to the surgeon. The second mailing label will be retained by the bonded agency to be used in returning the results of the evaluation and critique to the surgeon. Since the surgeon himself makes out these labels, he can be certain to direct the report on the evaluation to himself personally in such a way that absolute confidentiality is maintained.

The answer sheets must be returned to the bonded agency by a specified date early in 1972. They will then be evaluated by computer and the scoring and critique returned to the individual some weeks later.

It is anticipated that between ten and 25 hours will be necessary to complete the evaluation. Therefore, a minimum period of six weeks will be permitted for completion of the examination before the deadline date. Since scoring is on the basis of comparison with peer specialists, it is apparent that the scoring of all examinations must be done simultaneously. When scoring and critique are completed, the results will be returned by the National Board of Medical Examiners to the bonded agency which will use the second mailing label to return the results to the individual surgeon.

The National Board of Medical Examiners

The College is desirous of having the highest level of professional knowledge in the testing field available for this program. The testing of medical knowledge is a unique science which has reached a high level of development in the last several decades. Fellows of the College are fortunate to have the participation of the National Board of Medical Examiners in the program. The NBME has had years of experience in administering tests of knowledge. Its staff is composed of physicians, medical educators, psychometricians, and editors, with the back-up of the appropriate computer technology. The reputation of the NBME will give assurance to the Fellows of the absolute confidentiality of the self-assessment program.

All Fellows of the College and other interested physicians are urged to take advantage of this unique opportunity to evaluate their surgical knowledge.

SURGICAL EDUCATION AND SELF-ASSESSMENT PROGRAM

The following nationally recognized surgeons have contributed generously of their time to make this program possible:

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*Indicates membership on the Standing Committee on Continuing Education.

NATIONAL BOARD OF MEDICAL EXAMINERS

The staff of the National Board of Medical Examiners participating actively in this program are:

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