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presidential address

Certification of special competence in critical care medicine as a new subspecialty

A status report

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Intensive care units (ICUs) have come of age. Some of them have been in existence for more than 25 years. In Europe, physician leadership in the ICUs mostly evolved within the specialty of anesthesiology, although intensive care medicine has become a primary specialty of its own in some southern European countries, such as Italy and Spain. Further, primary specialties of intensive therapy are also under development in Australia and Mexico. All these countries require considerable training in anesthesiology and internal medicine in addition to experience in different types of ICUs.

The development in the United States has been different with individuals from primarily the four specialties of anesthesiology, internal medicine, pediatrics, and surgery assuming the role of ICU directors in our hospitals. Many of these physicians became involved in hospital-wide cardiopulmonary resuscitation and some also in the initial care of the critically ill at the scene of the injury, during transportation to the hospital, and in the emergency room. This combined field of emergency care for acute life-threatening conditions, resuscitation and intensive therapy, is now known in the United States as critical care medicine (CCM). It is referred to as reanimatology in many European countries, including France, Spain, Italy, and the Soviet Union.

In the United States, prehospital care of acute life-threatening conditions has become the domain of paramedics, who in their rescue vehicles and mobile ICUs, are under remote medical direction via radio communication by emergency medicine (EM) physicians who are taking care of all acute admissions in the emergency department (ED) of an increasing number of hospitals throughout the nation. However, it has been estimated that only about 5% of all acute ED admissions are caused by life-threatening conditions. Therein lies a significant difference between the EM and CCM physicians, since the latter, being based in the ICU, devote most of their time to critically ill patients.

In larger hospitals, CCM physicians, together with other specialists, should be called to the ED for resuscitation of all patients with life-threatening conditions, in preparation for more specific therapy in the operating room and/or ICU. In smaller hospitals, the EM specialist may be the only physician in the house, covering both the ED and ICU. Obviously, there is significant overlap between EM and CCM. Therefore, close cooperation in the education of physician specialists in these two new fields of medicine seems warranted. However, the current effort for EM is to form a conjoint specialty board, while CCM is developing into a subspecialty of several primary specialties. The purpose of establishing a subspecialty in CCM is to offer recognition of those physicians who can document special training, knowledge, skills, and expertise in this new field.

In 1972, a mail ballot among the members of the Society of Critical Care Medicine (SCCM) resulted in an affirmative vote for establishment of a subspecialty in CCM of interested primary boards. The following year, Peter Safar, MD, as President of the SCCM presented this idea at the National Conference on Education of Physicians in Emergency Medicine Care, sponsored by the American Medical Association Council on Medical Education. However, a recommendation in 1974 by the SCCM to the American

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Board of Medical Specialties (ABMS) to implement a multidisciplinary subspecialty of CCM was unsuccessful. Since then, CCM has continued to develop rapidly and the SCCM has also experienced considerable growth with an expected membership of more than 1000 individuals in 1979. CCM training programs have been introduced in an increasing number of medical centers throughout the United States, and with it followed a growing demand for recognition of CCM as a new subspecialty.

In the fall of 1976, letters requesting "advice and comments" regarding the need for recognition of CCM as a new subspecialty were sent to the four American Boards of Anesthesiology (ABA), Internal Medicine (ABIM), Pediatrics (ABP) and Surgery (ABS), plus the American Society of Anesthesiologists, American College of Physicians, American Academy of Pediatrics, and American College of Surgeons. However, at the Annual Business Meeting of the SCCM in 1977, there was concern regarding the appropriateness of the above approach to the four primary boards. Therefore, on recommendation by the SCCM membership, a questionnaire was distributed to all members to procure information from the membership whether negotiations for a CCM subspecialty were, indeed, desirable and appropriate Society business. Of the 162 members responding to the questionnaire, 80% reacted favorably, clearly indicating that the Society should continue the already initiated dialogue with CCM involved boards.

The letters to the four primary boards and the corresponding main specialty societies were well received and resulted in recommendation by the boards to the ABMS to take appropriate steps toward recognition of CCM. The ABMS, which consists of 20 primary boards and two conjoint boards, responded by calling a meeting in Chicago on June 8, 1977, of representatives from the ABA (James F. Arens, MD), ABIM (James J. Leonard, MD), ABP (Frank A. Disney, MD), ABS (Harvey R. Butcher, MD) and SCCM (Ake Grenvik, MD). Glen R. Leymaster, MD, Executive Director of the ABMS, served as chairman. The discussion on how to recognize CCM resulted in a recommendation by this group to the ABMS to establish a formal committee on CCM.

At its meeting in September 1977, the ABMS decided that its Committee on Certification, Subcertification, and Recertification (COCERT) was the appropriate body to handle the problem of CCM recognition and in December, COCERT formed a subcommittee on CCM, which met in Chicago on January 31, 1978. Present were not only the above representatives of the Boards of Anesthesiology, Internal Medicine, Pediatrics, and Surgery, but also Glen R. Leymaster, MD, (ABMS) and two representatives of COCERT, William J. Reals, MD, of the American Board of Pathology, selected as a "neutral" chairman, and James W. Humphreys, Jr., MD, the Executive Director of the American Board of Surgery. Further, the Boards of Colon and Rectal Surgery, Family Practice, Neurological Surgery, Nuclear Medicine, Otolaryngology, and Radiology sent representatives as did the American College of Chest Physicians and American Thoracic Society. From the SCCM, Max Harry Weil, MD, Christopher Bryan-Brown, MD, and Ake Grenvik, MD, participated.

At the January 1978 meeting of the subcommittee on CCM, Dr. Leymaster outlined three possible tracks for a certificate of special competence in CCM: (1) special certification under two or more primary boards, each operating independently. Example: cardiology under the ABIM and pediatric cardiology under the ABP. (2) Two or more boards using the same procedure, same criteria, and a single examination, although each would issue subspecialty certificates to its own diplomates. Example: dermatopathology under the American Boards of Dermatology and Pathology. (3) A common subspecialty examination for eligible diplomates of all interested boards. In the latter case, the sponsoring boards may jointly or separately establish criteria regarding eligibility for examination and passing scores and each board would issue its own certificates. While this mechanism is a possibility and is included in the ABMS bylaws, this option is not presently in operation. After considerable discussion, the subcommittee on CCM unanimously decided to support the concept of a certificate of special competence in CCM, developed under the guidance of the ABA, ABIM, ABP, and ABS, with consultation from other interested appropriate boards and the SCCM.

Drs. Reals and Humphreys reported on the above resolution by the subcommittee on CCM to COCERT at its meeting on February 9, 1978. Based on this report, COCERT made the recommendation that the ABMS should authorize COCERT to form a working group consisting of representatives designated by the ABA, ABIM, ABP, ABS and SCCM to develop further the mechanism for certification of special competence in CCM. At the annual ABMS meeting on March 16, 1978, this recommendation of COCERT was unanimously accepted. The Executive Committee of the ABMS was informed of the plan for proceeding, which recognized the temporary role of COCERT as a convenor of the interested parties and its permanent role as the primary evaluator of the proposal, once prepared and submitted by the sponsoring boards. Indeed, the ABMS Executive Committee enthusiastically supported this process and urged COCERT to proceed.

On May 18, 1978, the COCERT subcommittee on CCM met again in Chicago. A task force was formed

as recommended by COCERT and the original representatives of the ABA, ABIM, ABP, ABS and SCCM became the five members of the task force with the exemption that Larry C. Carey, MD, replaced Harvey R. Butcher, MD, as the ABS delegate. James J. Leonard, MD, (ABIM), was elected chairman of the task force, officially charged with "the development of the mechanism which will allow granting of certificate of special competence in Critical Care Medicine". However, any proposal must be finalized by the sponsoring primary boards and be submitted by these boards to the ABMS for approval in accordance with the bylaws of that organization. In keeping with past policy, COCERT will first review this potential proposal and then make recommendations to the ABMS Executive Committee and to the voting board representatives of the ABMS.

The American Hospital Association (AHA) Committee on Medical Education has also demonstrated interest. At its meeting on January 13, 1978, the issue of CCM recognition was brought up for discussion. While it was recognized that there is need for special knowledge and skills on the part of those providing patient care in the ICUs, there was also concern about proliferation of medical specialties. A number of points was cited which need consideration in the creation of another specialty, including cost, continuity of care, medical-legal concern, the possibility for excessive dependence on specialties in the ICU, and support of the elitist aspect that is present in any demand for specialty board recognition. However, there was general agreement that the AHA needed to take a position on the CCM issue. Therefore, the AHA committee on medical education voted to recommend: (1) recognition of the need for expertise in the provision of critical care services; (2) acknowledgment for development of standards in CCM through the issuance of a certificate of special compentence by existing specialty boards; (3) opposition to creation of either a primary or a conjoint board in CCM.

The above seems to demonstrate a common understanding among the involved boards, the SCCM and AHA that subspecialty certification is the preferred route of the three different available certification options. In cooperation with the SCCM education committee, the task force on CCM during 1978 has been analyzing the many details regarding application for and implementation of such certification.

One immediate question is what requirements will be necessary to receive this subspecialty certification. It is obvious that the following three criteria will be of primary importance: (1) board certification in a primary specialty; (2) adequate time of approved CCM fellowship training; (3) passed written CCM subspecialty examination.

Whenever a new specialty or subspecialty is established, temporary requirements for examination eligibility have been used. However, the ABMS bylaws clearly state that no "grandfather clause" is permitted. Therefore, all who want this certification must take the examination. Those who have been active in CCM before there were any training programs established, might be eligible for the examination, if they, for instance, have at least 5 years of experience in CCM. Further, there are several physicians in the nation with only 1 year of CCM education, since most existing CCM training programs started by offering fellowships limited to 1 year. If the minimum CCM training period will be 2 years, these individuals might be permitted to take the examination, if they, as an example, in addition, have a specified minimum time of CCM experience. Of course, there will be other physicians with different lengths of formal education in CCM, but a few months of such training beyond what was included in their primary residency will probably only count as equal to that same time of CCM experience. After several years, perhaps by 1986, all who want to obtain CCM certification will first have to spend the required time as trainees in an approved CCM fellowship program.

The ABMS bylaws require detailed documentation and justification to accompany any application for a new board or subspecialty. It was expected that the SCCM would be able to provide a large portion of all this information. Therefore, to expedite this matter, the SCCM education committee at the 1978 annual meeting of the Society decided to establish a number of subcommittees on various topics listed in the ABMS bylaws. Thus, subcommittees were formed on definition of CCM, body of knowledge, curriculum, CCM literature, examination, qualification for examination, needs for and effect of CCM training, and cost of CCM training.

The ABMS task force on CCM in cooperation with the SCCM education committee has agreed that CCM is concerned with all aspects of the management of patients with life-threatening conditions and that CCM is a multidisciplinary endeavor that crosses traditional departmental and specialty lines since the problems encountered in the critically ill patient encompass various aspects of many different specialties. Further, the CCM physician is recognized as a subspecialist whose knowledge is of necessity broad, involving all aspects of the management of the critically ill patient, and whose base of operation is the ICU. This physician has completed training in a primary specialty and in the CCM aspects of many disciplines, enabling him to integrate the efforts of various specialists on the patient care team in the ICU, use recognized techniques for vital support, teach other physicians, nurses, and health professionals the practice of intensive care, and foster research and provide

administrative function in the ICU. Thus, CCM is a unique discipline, based in the ICU, with its primary concern being the continuous care of the patient with a critical illness.

There already exists a group of physicians who possess knowledge and skills in the field of CCM. This is essentially the physician membership of the SCCM which at the 1978 annual meeting increased to a total of 888 members. With 8% of the membership nonphysicians and 13% foreign members, about 80% of the total membership, i.e., approximately 700 individuals are CCM physicians in the United States. This does not include the unknown number of CCM physicians who are not members of the SCCM. However, this number is expected to be relatively small.

In 1976, information on 26 CCM training programs was published in this journal but that information is already obsolete. Therefore, the subcommittee on curriculum (Chairman: D. Greenbaum, MD) in 1978 surveyed the SCCM membership and approximately 50 training program directors responded. This material is being analyzed for publication in this journal. The obtained information reveals that almost half of the 50 programs now have 1 or 2 year CCM fellowships. The majority of these fellows had completed a residency in anesthesiology, internal medicine, pediatrics, or surgery when they commenced their CCM fellowship.

Accreditation of established residencies are offered by the Liaison Committee on Graduate Medical Education after inspection by one of the national residency review committees, consisting of members from the American Medical Association Council on Medical Education, the involved specialty board and the main society of that specialty. However, there do not exist any similar review committees for fellowships, since each board is responsible for approval of its own subspecialty programs. But, when dealing with a subspecialty of several primary boards, this procedure may be impractical. Therefore, one might anticipate an inspection committee consisting of members from the different boards sponsoring subspecialty certification in CCM, the Council on Medical Education of the American Medical Association, and the SCCM.

Review and preliminary evaluation of the credentials of all applicants for admission to the CCM certifying examination will most likely be carried out by a credentials committee consisting of representatives of all sponsoring boards. Final approval of such candidates may be the responsibility of the board under which the candidate received his primary certification. This board would also issue the certificate. However, those potential individuals holding primary certification by a board other than those of anesthesiology, internal medicine, pediatrics, or surgery, should also be considered. Their applications could be reviewed by the above credentials committee which could request the most appropriate parent board regarding the individual's background to sponsor his or her examination and certification. Thus, subspecialty certification in CCM need not be limited to specialists in anesthesiology, internal medicine, pediatrics, and surgery.

All candidates for subspecialty certification in CCM would be required to pass a comprehensive objective examination covering the whole field of CCM. This would be a written examination offered to qualified candidates at regular intervals. There will probably be only one examination offered to all candidates regardless of primary specialty. The development of the examination content should be the responsibility of a committee representing the sponsoring boards with appropriate input from other interested boards and the SCCM. The passing score can be established by the sponsoring boards through their duly constituted representatives.

The subcommittee on examination (Chairman: L. Thompson, MD) of the SCCM Education Committee in 1978 designed a selfassessment test which was distributed to the SCCM membership and in addition provided to all registrants at the annual meeting this year. Not only physicians but also other members of the Society were encouraged to take the exam. In fact, it was offered to non-Society CCM practitioners as well to give the widest possible data base. Analysis of the results is expected to provide information on current knowledge in CCM among various categories of CCM professionals. From this, the education committee will gain valuable experience in designing an examination for subspecialty certification which should be of significant help to those boards which decide to go ahead with certification in CCM.

A statement projecting the need for and effect of the new certification on the existing patterns of specialty practice including the effect of the quality as well as the cost of providing subspecialty CCM care must also be submitted. There is no doubt a need for physicians specially trained to care for patients who are acutely and critically ill, requiring intensive and continuous surveillance for the detection and treatment of multiple organ failure. Many critical care units in large teaching hospitals already have staff physicians with such patient care and teaching obligations. However, it is unclear whether CCM training programs will cause an increase in the total number of trainees or merely a redistribution of existing house officers. It is reasonable to expect that the cost of formalized training in CCM, at least in part, would represent a redistribution of physician trainees and not entirely new expenses.

Preliminary affirmation of the concept of issuance of a certificate of special competence in CCM to be carried out by the sponsoring boards is implied by the favorable recommendation by COCERT, the executive committee of the ABMS and its voting membership. However, final approval of all individual board members of the ABMS for this certification will not be possible until the proposal is completed and submitted to the ABMS by the sponsoring boards. The task force on CCM is expected to have a draft application ready by November 1978 with all necessary appendices of required information for review and indicated modifications by the sponsoring boards before anticipated submission to the ABMS. The earliest possible approval of a formal CCM subspecialty would be at the annual meeting of the ABMS in March 1980 with a potential first certification examination that same year or in 1981.