

One of the goals of Thoracic Society is to improve the level of the Turkish chest medicine training to the highest international standards. Two sides of the Atlantic have a different approach; the main difference is the involvement of critical care medicine training in the pulmonary medicine training in the USA. The Europeans are having a hard time in understanding this, thus they asked the current editor of the American Respiratory and Critical Care Medicine, Martin Tobin to write on this phenomenon. This was published in France, (1) The British were also very much interested in this subject, therefore they published the same article in Thorax. (2) I believe that the readers of TRJ will also benefit from the same article.

Pulmonary and critical medicine: a peculiarly American hybrid?

Martin J Tobin

The evolution of pulmonary medicine over the last 15 years has differed in the United States from that in other countries. Today, most fellow applicants to a pulmonary training programme seek combined training in pulmonary medicine and critical care medicine. Programmes that offer fellowship training in pulmonary medicine alone, without critical care training, are decreasing in number. Of the 2019 fellows trained in pulmonary medicine in the United States over the last five years, 79% obtained their training in a three year combined pulmonary and critical care medicine programme; this number increases to 88% if programmes in New York are excluded. (3) Applicants to fellowship programmes that offer training in critical care medicine alone have concurrently decreased. As such, the majority of newly certified pulmonary physicians in the United States also obtain certification in critical care medicine, and vice versa. This experience is very different from that of pulmonary medicine in Europa, and even from that in Canada.

Critical care medicine is one of the most recent disciplines in medicine. The crucible for its development was the polio epidemic in Copenhagen in 1952. An anaesthesiologist, Bjorn Ibsen, found that the combination of careful airway management and positive pressure venti-

lation-skills previously confined to the operating theatre resulted in a dramatic reduction in mortality of patients presenting with respiratory paralysis. (4) With the focus on airway care and ventilator management, it is not surprising that anaesthesiologists led the way in the introduction of intensive care units (ICUs) and the development of the new discipline of critical care medicine. (5,6) In the 1960s and 1970s technological advances pioneered for aerospace research were directly incorporated into intensive care monitoring. (7) These technological advances, especially in cardiopulmonary monitoring and treatment, combined with the considerable growth in knowledge of the pathophysiology of critical illness, attracted internal medicine physicians into the ICU. (7)

In the late 1970s efforts were initiated to formalise the training and certification process in critical care medicine. The American Board of Medical Specialties (ABMS) convened a meeting of four interested primary specialty boards-anaesthesiology, internal medicine, pediatrics, and surgery-to consider certification in critical care medicine. (8) A joint committee, formed in 1980, held discussions on certification in critical care medicine defined as "a multidisciplinary endeavour that crosses traditional departmental and specialty lines". Disagreements arose on eligibility criteria and the ability to develop a common certification examination for candidates with such diverse medical backgrounds. The dissolution of this committee in 1983 was regarded by some commentators as evidence that American medicine did not accept critical care medicine as a discipline that crossed primary specialty lines. (9) In 1985 the American Board of Medical Specialties approved the development of individual primary specialty boards of their own individual certification processes. The first examination for internal medicine specialists were held in 1987 has since been offered on a biannual basis.

Not only did the primary medical boards fail to reach consensus on critical care medicine, disagreement also arose among internal medicine specialists as to the place of this new discipline. (10) Some consider it a separate distinct subspecialty, while others regard it as a form of special competence held by certain physicians already certified in one of the pre-existing nine subspecialties of

internal medicine such as pulmonary medicine or cardiology. To cater for both philosophies, trainees can choose one of three pathways; training in a subspecialty (for example, two years fellowship training in pulmonary medicine or any other subspecialty) plus one additional year in a certified critical care medicine programme; or two years of training in a stand alone critical care medicine fellowship programme. Before commencing fellowship training, applicants must have first completed a residency in a certified internal medicine training programme (minimum of three years) and be eligible to sit the board examination in internal medicine.

A combined fellowship in pulmonary and critical care medicine is now the most popular approach for training and certification. To date, 6054 internal medicine specialties have obtained certification in critical care medicine, and only 7% of these listed a straight two year critical care fellowship as their training pathway. Moreover, of the 746 internists who have taken the re-certification examinations in critical care, 78% also possess board certification in pulmonary medicine. One reason that a combined pulmonary and critical care medicine fellowship has become the most popular pathway is the fear of "burn out" among physicians who practise critical care medicine on a full time basis. As physicians grow older, those with qualifications in both pulmonary medicine and critical care medicine have the option of increasing the pulmonary component of their practice and spending less time in the ICU. In the survey by the Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS), pulmonary and critical care physicians reported that pulmonary medicine accounted for most of their clinical time and about one third of their time was spent in the ICU.

In contrast to the early domination of critical care medicine by anaesthesiologists, their involvement is now small in the United States. To be eligible to take the critical care examination sponsored by the American Board of Anaesthesiology, candidates must have completed a one year fellowship in critical care medicine (this contrasts with the two year minimum of fellowship training required to take the examination offered by the American Board of Internal Medicine). Like internal medicine trainees, they must have first completed a three year residency in anaesthesiology and be eligible to sit the primary board certification examination. In a recent survey of 36 anaesthesiology critical care fellowship programmes, 33% did not have a single fellow over a two year period. (11) Almost 40% of these programmes receive only one or two applications each

year, whereas a typical combined pulmonary and critical care medicine fellowship programme receives more than 100 applications every year, Board certification in critical care medicine has been obtained by seven times fewer anaesthesiologists than internal medicine specialists (854 and 6054, respectively).

Directors of Pulmonary Divisions and Fellowship Training Programs in the United States recognise that their survival and growth is vitally linked with critical care medicine. In recognition of this fact, most divisions appended "critical care" to their name throughout the 1980s. In response to this change in focus, The American Thoracic Society (ATS) revised its mission statement explicitly to embrace critical care medicine. Of the 12 Assemblies within the ATS, the Critical Care Assembly has the largest membership. Since 1993 the society's scientific programme committee has ensured at least two critical care symposia each day of the annual international conference. The following year the society's journal changed its name to the *American Journal of the Respiratory and Critical Care Medicine*. In an official statement in 1995 the ATS Board of Directors (12) pointed out that, for optimal delivery of health care, the pulmonary and critical care physician "will provide principal care for all patients in (medical) ICUs".

Pulmonary medicine has re-invented itself repeatedly. Physicians with a special interest in tuberculosis were one of the first to break away from the parent specialty of internal medicine and become subspecialists in 1941. (13) With the development of effective antimicrobial therapy, sanatoria closed and the tuberculosis physician acquired a new body of knowledge and developed skills in pulmonary function testing, bronchoscopy, and later polysomnography. This transition occurred not only in the United States but also in Europe. As the new millennium approaches, pulmonary medicine is now well advanced in the latest phase of its chimerical evolution. Newly qualified pulmonologist in the United States regard the practice of pure pulmonary medicine as an anachronism of a bygone era in the way that those of us who graduated from training programmes in the 1980s viewed the subspecialists in tuberculosis. Until this latest phase, the subspecialty of pulmonary medicine has evolved along similar lines on both sides of the Atlantic, and it will be interesting to see whether the combination of pulmonary and critical care medicine will be replicated in Europe or remain a peculiarly American hybrid.

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Following the wide acceptance of noninvasive mechanical ventilation by pulmonary physicians in Europe and Turkey, I believe that the critical care medicine will be a very attractive area for the young Turkish internist and chest physicians as in the USA.

Turgay Çelikel, MD

CORRECTION

In the Turkish Respiratory Journal, June 2000, Vol 1, No.1, we regret to inform our readers that the author of the article on page 26, was misnamed. We apologize for the mishap, and we republish the same article on page 42 of the present issue with the right names: Drs. S. Fındık, L. Erkan, H. Tatlısöz, B. Kandemir. We also extend our apologies to the above authors.