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PRESIDENT'S PAGE

Cardiovascular training in 2017: Reshaping tradition to envision the future

"Τὰ πάντα ῥεῖ"

«Everything flows"

Heraclitus 475-535 B.C.

The ancient Greek philosopher stated in his famous quote that "everything flows". This concept is also true for the definition and documentation of medical competency that is evolving worldwide. The identification of key elements of medical competency is essential for providing better care in the field of cardiovascular diseases, which are universal causes of increased morbidity and mortality.[1]

"See one, do one, teach one" has been the central dictum of medical training since the residency system for medical school graduates was formulated by figures such as William Stewart Halsted, who was the first Chief of Surgery at Johns Hopkins Hospital.[2,3] It is now acknowledged that patients, hospitals, insurers, and the public rely on competent physicians. The traditional concept of training is based on the personal experience of trainers and allows for gradual increases of responsibility. The aim is not simply to increase the clinical competence of trainees. It is also important to create effective teachers for future generations of doctors. Mentorship is an essential aspect of lifetime training and provides "pearls" of clinical experience while promoting the ethical aspects of modern medicine and professionalism. The respect for the mentor-trainer should be inspired and nourished by both the mentor and trainee. The path to becoming a practicing cardiologist has evolved significantly. Thus, making better training choices requires understanding the current needs and challenges of the myriad subspecialties.[1,4]

One of the key issues associated with improving the training process is the number of doctors specializing in cardiology, which must be balanced against the needs of the national health system.[1,4] One modern concept is to select high-performing fellows to start their advanced subspecialty earlier and "fast-track" their career advancement by by-passing traditional educational time lines.

Physician subspecialisation after completing general cardiology training is increasing globally, and the majority of fellows select interventional cardiology, multimodality imaging, advanced heart failure, and structural heart disease interventions.[1] However, there is no guidance driven by analysis on which subspecialty to pursue based on the next decades' cardiovascular epidemiology. It is also unclear if different distributions of physicians lead to better outcomes.[1,4] The distribution of physicians will be heavily influenced by the ageing of the population. This change will alter cardiovascular practices and there is the need to address elderly care through career paths and fellowships.[4]

Testing the performance of a trainee should be based on written and verbal assessments in addition to competency-based summative and formative evaluations throughout training.[5] It is possible to improve core competencies by understanding the results. There should be emphasis on both the number of tests performed throughout training and the unsupervised skill quality in procedural areas such as cardiac catheterization, echocardiography, other imaging modalities.[1,4,5] The European General Cardiology Diploma is an important initiative to make education and evaluation of competence in cardiology more homogenous in Europe. As a result, the National Society has taken significant steps to engage more trainees.[6]

Further training in basic science, biostatistics, and translational and clinical research are essential for academic evolution of the trainees interested in this exciting and important field of cardiovascular medicine.[4] Future training programs should provide additional training time and an environment of mentorship, facilities and laboratories dedicated to research, and participation in congresses in conjunction with sources of funding through universities and national societies.

Unfortunately, there are alarming concerns regarding training quality and efficiency and more than one- third of residents declared they feel inadequately trained to safely

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make medical decisions and perform procedures alone.[1,4,5,7,] The accumulation of new information and technological advancements in cardiovascular medicine makes these concerns more troublesome.[1,4] Thus, attention must be directed towards new ways of training that enhance learning without exposing patients and trainees to medical errors. New technologies are entering into the training and accreditation of cardiologists including high-fidelity simulators and virtual- or enhanced- reality environments where the doctor can solve a specific clinical problem (i.e., treating a patient with myocardial infarction, life-threatening arrhythmia) or conduct a procedure (i.e., percutaneous coronary intervention, transcatheter aortic valve implantation).[8,9] The funding and organization of these programs should be undertaken by institutions and national societies that have the administrative and technical "know-how" for these multi-faceted, resource-intensive, educational activities.[4]

E-health and e-education are innovations in the field of cardiovascular medicine that are significantly changing training and competence verification.[1,4,10] One of the successful examples of online platforms that provide high-standard professional continuing education is the e-learning website (EscEL) of the European Society of Cardiology.[10] Our national society is actively promoting this effort by organizing the pioneer network of trainers and trainees in Greece for the first time in 2017. Although no online educational tool can substitute for a hands-on clinical training program, e-learning can contribute to harmonizing knowledge and practices throughout Europe.

A "not to forget" issue is the increasing prevalence of "burnout" in cardiologists caused by the long working hours and increased professional responsibilities that decrease the quality and safety of health care.[4] Thus, reconstructing cardiology clinical programs with nightshifts, providing adequate time for rest, and promoting a healthy working environment are current initiatives in Europe and elsewhere. However, further implementation of these changes in cardiovascular training programs requires considering the particularities of each national health system in terms of organization and staff resources.

Maintaining physician competence after training in cardiovascular practice remains complex because the level of knowledge and advancements require reaccreditation.[1,4,5] This could involve documentation of lifelong learning activities to ensure the physician maintains up-to-date in their area of expertise. However, the metrics and the system for this vary significantly across Europe. The Hellenic Society of Cardiology is organizing a more integrated approach to this important aspect of patient care.

Improving the training of future doctors by maintaining and enhancing their competence in addition to promoting their lifelong learning are goals will have a major impact on cardiovascular outcome. The role of the Hellenic Society of Cardiology is to reshape traditional training programs of cardiovascular medicine into a modern standardized system of education and certification that would embrace and address the Heraclitus quote: "Τὰ πάντα ῥεῖ".

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