Postgraduate Training Around the World

Internal medicine in Greece

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Introduction

In this overview various aspects of training in postgraduate medicine in Greece will be presented and an effort will be made to correlate this information with the social infrastructure, to give a definition of the social role and particular tasks of the internist in the modern Greek establishment and, finally, to understand the determinants of possible solutions to the current problems.

Health service provision

There are 32,000 doctors in Greece, i.e. 32 per 10,000 of the general population, of whom 35% are internists. In Athens, 17,000 doctors are practising (40/10,000), of whom 21% are internists (7.7% general internists and 13.3% specialists in internal medicine). In regional Greece there are 15,000 doctors (26/10,000), of whom 39% are internists.¹ A strong trend of centralization towards Athens is evident, along with a tendency to more specialists in the large hospital centres. Most internists belong to the National Medicine Association (PIS), in addition to the corresponding regional medical association of their area of practice. The most powerful regional association is the Athenian one (ISA), with 3,570 members.

A surprising 46% of all internists are actually in training. This can be explained by the surplus of admissions in the 5 medical schools in the country during the last 10–15 years. There are approximately 620 new admissions in undergraduate medical curricula per annum (6.2/100,000 general population). The annual increase in medical graduates is high (estimated at 1.93% p.a.) This is reflected by the average positive increase in membership of internists joining the Athenian Medical Association, of 4.61% p.a.²

The junior internist has a minimum monthly salary of £275. This amount should be interpreted in the light of the cost of living in Greece, which is on average one-third of that in the UK. Nevertheless, inflation is currently running at approximately 30–35% and the salary remains relatively low. In comparison, a consultant at the end of his/her career reaches a top salary of £760. Private internists are paid much more and may begin at £1,800 to finish by earning £4,000 a month. Academic internists in university hospital appointments tend to be much better off in comparison to their colleagues working in state hospitals and their average salary reaches £1,220. Full and associate professors are entitled to private patients and may earn anything from £2,000–4,000 a month. It is evident that the situation is strongly polarized and that doctors in the national health service (Ethniko Systema Hygheias: ESH) are driven to taking private patients on a semi-legal basis to compensate for their low status.

By law, 100% of the population is insured by the state against accidents and the same proportion theoretically should also be insured against illness. Nevertheless, 280 different state-run insurance agencies exist, some with semi-private contribution of funds, differing greatly in the quality of free care provided. These agencies cover costs of hospitalization and treatment only in state (ESH) hospitals and not in the private sector. Only 5–6 major private hospitals in central Athens provide adequate full-scale care and can run on an independent basis, both financially and medically. Doctors working in the private sector are strictly prohibited from working in the public one and vice versa. Less than 5% of the Greek population is fully medically insured through a private agency, thus by-passing ESH care.

The current cost of hospitalization in an ESH hospital is £136 per day, excluding drug treatment, surgery, or any other intervention. This amount is paid by the public sector in favour of the patient. Unfortunately, the quality of nursing, accommodation and care are widely disproportionate to this

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cost. Nevertheless, health spending and total health resources provided by the state continue to increase faster in Greece in comparison to other European countries and to other major national socio-economic sectors. Between 1975 and 1987, for example, the real arbitrary monetary value per capita gross domestic product (GNP) spent in health in Greece was 2.5 units, while the average of other OECD countries was 1.3 and that of the UK was 1.1. These data reveal a cost-ineffective system of provision of health care and major flaws in the underlying overall design policies.³

Postgraduate training

Admission to all 5 medical schools of the country is possible after successfully passing a national scale examination after graduating from high school. Pre-clinical training lasts 3 years, leading to clinical training of another 3 years duration. The last year is an internship year ('pre-registration' residency).

The medical schools provide the 'Ptychion Iatrikes' – Diploma of Medicine, which is equivalent to MB, BS in the UK or MD in the USA. It is obtained after examinations in 6 major clinical disciplines, out of a total of 36 in the undergraduate curriculum.

The postgraduate career structure in internal medicine is divided into 2 different schemes: academic, university hospital based and standard, ESH hospital based. The standard career structure for non-academic medicine begins with regional country service as a general physician in primary health care, lasting 1–2 years. It is an absolute pre-requisite for training in internal medicine and may be by-passed only if training is to be carried out abroad. National military service is still compulsory in Greece for adult healthy males and lasts 18–24 months. After their basic military training, doctors usually combine their army service with regional country service as junior medical officers.

The formal specialty training in internal medicine lasts 5 years. Admission to postgraduate training does not include entry examinations, such as the MRCP (UK), at the present time. The introduction of admission examinations, being actively discussed at the moment, remains a matter of dispute among junior doctors and ranks high in their political agenda.

An average general internist spends 4 years in basic training, which includes mainly rotas in cardiorespiratory/gastrointestinal tract diseases, along with accident and emergency training, usually in combination with training in other sub-specialties. Two semesters in a sub-specialty of choice (such as haematology, paediatrics, chest diseases, nephrology) are added to this basic scheme.

It takes 5–7 years to become a specialist in a sub-specialty. The first 2 years are spent in general internal medicine training and another 3–5 additional years are dedicated to sub-specialty training. The additional training duration varies according to the particular sub-specialty. Thus, it is 4 or more years in cardiology, haematology, endocrinology, gastroenterology, nephrology and rheumatology and 3 or more years in allergology. Sub-specialization in chest diseases includes only 1 year training in internal medicine and 3 years in pneumology.

Training posts are given formal recognition by the Ministry of Health and Social Security in both ESH and university hospitals. Some university hospital trainee positions are additionally recognized by the Ministry of Education. However, the maintenance of training standards is achieved far more efficiently in university hospitals than in ESH ones. For example, many more educational meetings and grand rounds, usually held on a weekly basis, are available in central Athens university hospitals than in ESH smaller units scattered in regional Greece. Some of these activities carry a long tradition, such as the famous Evangelismos Hospital grand rounds that have been educating postgraduate interns in Athens since the turn of the century.

Appointed university lecturers, assistant/associate and full professors provide clinical tuition to junior internists in university hospitals. Permanent senior registrars and consultants are the clinical tutors for trainees working in ESH hospitals. National congresses of sub-specialty associations are held annually, while in the 3 major cities (Athens, Salonika and Patras) postgraduate assemblies, focused on various topics, are held all year round. A significant number of Mediterranean, European and international meetings are also held in Greece. All the above provide experience of participation and presentation at such meetings and give the opportunity to feel the pulse of current trends in internal medicine. Not everyone, though, is equally likely to obtain study leave or a day off to attend a meeting of interest. Trainees who are based near Athens are privileged, because they do not have to travel far to the hub of educational activities, the capital. On the other hand, Athenian interns are rather overloaded with difficult and lengthy 'on-takes', due to the increased demands of medical services in the overpopulated city. Attendance at congresses and courses abroad becomes even more improbable, taking into account both the time and money spent.

Only rather generalized legal principles exist, concerning the training of hospital doctors, which have little to do with reality. The highest administrative bodies responsible for the education of interns are formally the medical schools, although it is true that the universities can neither control nor get feedback on the quality and quantity of training

obtained in hospitals, especially the ESH ones. Thus, the Greek postgraduate medical establishment and the related governmental bodies responsible for internship training are currently facing major problems concerning the unification of the standards of training and the assessment of the trainee's progress.

At the end of the training time the title (Diploma) of Specialization in Internal Medicine is obtained. This is roughly equivalent to the Diploma of National Boards (DNB) in Internal Medicine (USA). The title of sub-specialty is also equivalent to Joint Committee on Higher Medical Training (JCHMT) specialist status (UK) or the Diploma of National Boards in the particular sub-specialty (USA). Both titles are obtained after examination by a committee including university-appointed consultants, although this examination is not held through a unified national scheme. Moreover, there does not exist a unified national curriculum for this training and both its quantity and quality are determined by factors that are difficult to control, such as the location of the institution, administrative power of clinical directors and access to funds.⁴

During training in internal medicine all doctors are considered as house officers or senior house officers or 'external temporarily-attached clinical assistants'. During sub-specialty appointments, internists gradually undertake more clinical responsibilities and are considered as 'temporary registrars'. This appointment and title is automatically suspended after completion of the training. Those doctors wishing to stay in hospital medicine submit applications for permanent registrar appointments in sub-specialties (non-rotating). At this stage, there usually exists a long waiting list and the average waiting time is 2.5–3 years. During this period, internists may work in regional Greece as general physicians or in private hospitals. After obtaining a registrar post, gradual progress is made towards senior registrar positions. A few of the senior registrars get consultant appointments (usually in regional hospitals) approximately 15–20 years after completing the specialty training, painfully verifying the old adage 'All comes with seniority'. These highly desirable appointments are limited and controlled by the government. The criteria set for the recruitment of consultants are administrative to the same degree as they are scientific, and politicking can be intense among the candidates for these positions.

A surprisingly low percentage of internists work in the private sector, while most of the positions taken belong to ESH. In large cities most of the internists end up as specialists in a sub-specialty and do not provide general medical care. Thus, a nephrologist is rarely responsible for the cardiac status of his/her patients on dialysis who have a

myocardial infarction. The situation resembles the practice of medicine in France or the USA, being dissimilar to the UK system. The overspecialization creates obvious problems in patient care, if one considers the much more limited funds Greece has, in comparison to countries such as France or the USA. In addition, overspecialization is one of the major reasons for the increase in the number of doctors.⁵

Postgraduate training for academic (university based) internal medicine shows basically the same pattern as non-academic training with some differences. Firstly, training appointments should be made from the beginning at a university hospital. During the first 5 postgraduate years an MD degree is highly recommended. This degree may be of clinical or basic research interest, and done while on clinical training (part-time) or separately (full-time). Its duration is 2–3 years. A *numerus clausus* has been recently introduced with a maximal number of MD graduates of 50–60 per annum. A couple of years ago, the number of candidates for the submission of an MD thesis was reaching more than 600 annually. The degree is currently obtained through the medical schools of 5 universities, through a final viva exam.

PhD degrees are not formally administered by Greek universities, due to underdevelopment and underfunding of basic medical research facilities. It is, however, possible to obtain a PhD thesis by working a full-term 3 year period at the Greek Pasteur Institute (mainly in immunology) or the National Research Institute (mainly in oncology/haematology and genetics/biology), with funding and direct supervision from a university department of internal medicine. A restricted number of Greek doctors get their PhD degree abroad.

DSc (Med) (Hyphigesiae) degrees are obtained from the 5 medical schools on occasions of outstanding research performance. They are considered the highest obtainable qualification and a number of prerequisites should be met before a doctor considers an application for a DSc. Among these are a minimum of 50 publications in Greek and 25 publications in international journals, and presentation of a considerable amount of clinical or basic research work in the sub-specialty. A DSc is obtained after a formal session of the university electoral body for evaluation and final unanimous election of the candidate doctor. Although the university and government administrative and legal requirements for nomination of the DSc degrees are at the moment in a state of flux, these degrees are usually obtained by colleagues who have worked several years abroad on innovative research topics.

All previous qualifications help to push forward one's career most considerably (by several years) and usually lead to the nomination of a full or

assistant professorship in internal medicine. From the above, it is evident that the academic degrees obtained lead to increasing financial benefits and provide access to a more stimulating working environment.

As previously mentioned, a number of Greek internists pursue a career abroad, with considerable financial, personal and social cost. Most of them are industrious and obtain the highest qualifications in the countries to which they have emigrated. The majority of these colleagues have a strong desire to return to Greece in some future time, to improve the status of education in medicine and provide their skills in achieving a better standard for patient care in the country. In addition, they probably represent the most promising group of future leaders in research development in Greece. Unfortunately, the present system forces them to stay away from the country. The same dichotomising system (low level ESH 'cheap' care and inadequate education *versus* limited academic posts and private 'lucrative' medicine) puts in despair the physicians already working in the Greek system, who might have traces of idealism left driving their ambitions and hopes for a better education, better patient care and, perhaps, better social infrastructure.

Conclusions – perspectives for the future

Postgraduate medical education represents a valuable investment of any country in the future well-being of its inhabitants and its quality and extent determines the character of the medical professional community at a national level.⁶ Medical education in Greece presents problems that are closely linked to more extended dilemmas of a political, financial and social nature.

Under-employment of internists may be solved by reducing drastically the number of doctors and by introducing a *numerus clausus* in every subspecialty.⁷ Intensive privatization initiatives should

be followed to create a more liberal, less state-dependent ESH and to raise funds for primary care. Examinations should be set up at every stage of a postgraduate curriculum, which should be the same for all teaching hospitals and laboratories. Quality control of the system should be regularly performed through postgraduate speciality colleges, following the example of the Royal Colleges in the UK or the National Board of Medical Examiners in the USA. Medical research should be encouraged and funded. Waiting lists in the professional ladder should be cut down and the 'brain-drain' of colleagues studying and practising abroad should be decreased to acceptable numbers. Designers of overall national medical educational policies should be appointed in non-governmental positions to consult the ministers of Health, Education and Finance. Finally, Greece should aim at European integration at all levels, including postgraduate medical education. Having better educated doctors means better primary care in the ESH and increased scientific output in academic medicine. It also means participation in supra-national exchange programmes within the European Community and access to vital information in the design of future health and education policies at European level. Junior internists are the most likely candidates to undertake such responsibilities of wider scope in society in the fatherland of Hippocrates.

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