

Special Article

Pursuing Postgraduate Training in Internal Medicine and Cardiology in the USA: An Introduction for Greek Physicians

EMMANOUIL S. BRILAKIS¹, HARILAOS S. BRILAKIS²

¹Division of Cardiovascular Diseases, University of Texas Southwestern Medical School, Dallas, Texas, USA;

²Cosmos Eye Center, Athens, Greece

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Address:
Emmanouil S. Brilakis

Dallas VA Medical
Center (111A)
4500 South Lancaster Rd.
Dallas, TX 75216, USA
e-mail:
esbrilakis@yahoo.com

As boundaries fall in an increasingly interconnected world, more and more skilled people, including health care providers, decide to move abroad in pursuit of the best medical training and a career.¹ The United States of America has traditionally provided an outstanding environment for postgraduate medical education. We frequently receive inquiries from Greek medical students and graduates on how to pursue clinical and research training in the USA. The goal of the current review is to summarize the requirements and the steps needed to succeed in entering into residency and cardiology (or other subspecialty) fellowship training in the USA, with an emphasis on the needs of Greek physicians.

Why pursue clinical training in the USA?

Crossing the Atlantic to obtain postgraduate clinical training is a major decision, and should be taken only after careful consideration of the advantages and disadvantages.

Advantages

1. No waiting list for residency. If you receive an offer for a position you can start your training immediately. This may be particularly important in view of the increasingly long waiting times for internal

medicine and especially cardiology training in Greece.

- High training standards. The USA has traditionally been a very rigorous environment with regard to medical training. The trainees' performance is regularly assessed via annual national examinations, and great emphasis is given to teaching. Most US training programs offer access to the latest medical technology and library support.
- Excitement, a new experience, and living in a foreign country. You can also meet people from all over the world and expand your horizons.
- Clinical training positions are paid positions and the salary is usually sufficient to cover your living expenses.
- Multiple research opportunities. You can obtain both formal and informal training in research methodology, and you can participate in various clinical and basic science research projects. Also, should you decide to pursue an academic career, you can apply for a variety of research grants, though lately research funding has become increasingly competitive.
- Ultimately, the decision to move to the USA or any other foreign country for further training is, we believe, largely related to an intrinsic desire for self-improvement. Being exposed to a competitive novel environment, one is deeply

motivated to improve and achieve more of one's potential.

Disadvantages

1. Hard work. Just getting into a US residency program requires a lot of work, and even more work is required after you start your training. Several US training programs have gained notoriety for the very long hours (or days) of work they require. This has significantly improved lately with the introduction of the 80-hour rule, which means that no trainee should work more than 80 hours per week. Assuming one works 6 out of 7 weekdays, this still amounts to approximately 13 hours of work daily.
2. Different social environment. There are significant differences in society and culture between the USA and Greece, which may appear fascinating to some, but may be hard to overcome for others.
3. Separation from family and friends. Greeks have traditionally had strong ties with their families and friends that may suffer during the prolonged duration of residency/fellowship training.
4. Uncertainty: there is no guarantee that after starting training in internal medicine you will find a fellowship position in cardiology.
5. Recognition of specialty training in Greece. Since there is no reciprocal agreement, in order to practice in Greece after training in the USA, you will need to pass the Greek specialty examinations, in addition to the US examinations.
6. Potential difficulties in securing a staff position and returning to Greece after training. Due to the long distance, often exhausting working hours and short leaves, this has been frustrating compared to training in a European country. The process could be facilitated by maintaining ties with the Greek health system, cooperating with Greek hospitals, participating in Greek cardiology meetings, collaborating with Greek academic centers in research and examining potential return options from the first year of fellowship.

Residency + fellowship in the USA: the process

In order to train in cardiology (or any other internal medicine subspecialty) in the USA, you first need to complete an internal medicine residency program (duration 3 years). During the second year of your internal medicine training you apply for a cardiology (or other internal medicine subspecialty) position.

The following steps must be taken:

1. Obtain certification from the Educational Commission for Foreign Medical Graduates.
2. Apply to many different training programs and interview in as many programs as you can.

ECFMG certification

The Educational Commission for Foreign Medical Graduates (ECFMG) (<http://www.ecfm.org>) is a nonprofit organization that "assesses the readiness of international medical graduates to enter residency or fellowship programs in the United States that are accredited by the Accreditation Council for Graduate Medical Education" (ACGME, <http://www.acgme.org/>). To obtain ECFMG certification one needs to pass steps 1 and 2 of the United States Medical Licensure Examination USMLE (<http://www.usmle.org/>) and the Clinical Skills Assessment (CSA). The USMLE examination can be taken in Greece: however, you will need to travel to the USA to take the CSA examination.

Passing the USMLE examinations is the step that intimidates most prospective USA residency candidates. Indeed, the USMLE examinations can be tough and require significant effort and preparation. Moreover, just "passing" the exam is not enough and can actually be detrimental, since it is much harder to find a residency position if your USMLE score is low. Since most of the USMLE questions are in a multiple choice format, it is very helpful to practice using multiple-choice question based preparatory books or software. There are several books, online and live courses to help with preparation for the USMLE examinations (such as the NMS series, USMLEWorld, and the Kaplan series).

Applications to different training programs

Once you have obtained ECFMG certification, the next step is to apply to different US internal medicine training programs. This is done through the National Resident Matching Program (<http://www.nrmp.org/>). The application process requires electronic submission of several documents (such as *curriculum vitae*, a personal statement, and several [usually 4] letters of recommendation) to the Electronic Residency Application Service (ERAS, <http://www.aamc.org/audienceeras.htm>), which subsequently distributes this information to the programs you choose to apply to. Obtaining advice from people familiar with the

preparation of these documents is helpful to ensure that you make the best possible impression, and also to best choose which programs to apply to.

Although there is no limit on the number of applications, most foreign graduates apply to >50 (and usually >100) internal medicine residency programs. This may appear excessive, but is important in order to maximize your chances to be invited for an interview and to eventually secure a position. Before applying, you should look at the website of each program, to learn more about the program and to find out if it offers positions to non-USA citizens or green card holders. It is useful to apply not only to the best known and reputable training programs but also to less well known programs that can serve as backup.

After your applications are reviewed, you will hopefully be invited for interviews, which are critical to obtaining a position. Often, Greek physicians perform very well in written examinations but are less accustomed to interviewing, as this is not routinely required for postgraduate education in Greece. Having done clinical clerkships or research work in the USA can significantly help improve your interviewing skills.

Timing and visa

The earlier you make the decision to pursue postgraduate training in the USA the better. Ideally, the decision should be made early in medical school, in time to arrange for clinical electives in US medical schools. This both serves as an introduction to the American medical system and also provides the opportunity to obtain letters of recommendation from US physicians, which are key in the pursuit of a residency position. Sometimes you have to apply for a clerkship position one year in advance and some medical schools charge fees for those electives. Exhaustive preparation before coming to the USA for an elective is highly recommended. You want to be outstanding during your rotation and solicit the strongest letters possible (and also increase your chances for a residency position in that particular university).

To minimize the delay between medical school and residency it is best to complete the USMLE examination process before or soon after graduating medical school, so that you can immediately proceed with the application process. Many candidates also frequently pass USMLE step 3, because this may allow you to obtain an H-1B USA visa for your training. The H-1B visa does not require you to return to your home coun-

try at the end of training. However, most residency and fellowship programs only sponsor foreign medical graduates for a J-1 (exchange visitor) USA visa, which carries the obligation to return to your home country at the end of your postgraduate training for at least two years (maximum duration of training is 7 years).

Tips for success

Approximately one third of current USA trainees, including 31% of cardiology fellows and 46% of interventional cardiology fellows, are international medical graduates (IMGs, also sometimes called foreign medical graduates or FMGs).² Although this is a competitive process, chances are good and depend heavily on proper preparation and hard work.

Key factors in the decision process of a training program in internal medicine or cardiology to invite a candidate for an interview and eventually offer him/her a position are:

1. USMLE examination scores.
2. Previous experience in the USA and strong letters of recommendation, particularly from US institutions.
3. Clinical and research experience.
4. Leaving an excellent impression at the interview (well-written CV and personal statement, good interpersonal skills).

USMLE scores

Excellent scores in the USMLE examinations (at least >90th percentile, although increasingly more candidates have >95th or even 99th percentile scores). That is why the preparation should be thorough and methodical.

Previous US experience and US recommendation letters

Recommendation letters are very important; therefore, doing clinical or research rotations in the USA while still in medical school is crucial. Once you graduate from medical school it becomes much harder to participate in clinical rotations in the USA.

Clinical and research experience

We strongly encourage you to pursue clinical rotations in the USA while you are a medical student. Not only is it important to hone your clinical skills, it also

allows you to see with your own eyes what US clinical training is all about.

How can you identify opportunities for clerkships and research in the USA? Most of this information is available over the internet on training program and medical school websites. Also, it is very helpful if some of your professors in Greece have connections with colleagues in the USA. Finally, many Greek physicians are following academic careers in the USA and are happy to provide advice and assist other Greek physicians interested in following a similar career pathway.

Participating in a clerkship is not enough in and by itself. You need to prove that you are unique, by (a) knowing the current practice (i.e. if you are rotating in cardiology you should study intensively and thoroughly before and during the rotation so that you can answer questions arising during the rotation); (b) working hard, taking extra call, volunteering to make presentations, or just reading up on your patient and presenting what you read the next day to the team. Your goal is to impress your attending and encourage him/her to give you an outstanding letter of recommendation. You could gain extra points if you volunteer to write a case report or do a literature review, or work on any other publication.

Another option for obtaining experience of the USA is to spend a summer in research while in medical school, or even better, to invest 1-2 years in research before applying for a clinical training position. Working for 1-2 years in research is a very efficient way to gain the necessary skills to obtain a residency or fellowship position and may also help with obtaining a more desirable visa status (such as an H1 visa) and possibly pursuing a dedicated career in clinical or basic cardiovascular research.^{3,4} Research positions, especially salaried ones, are often hard to find and can be very competitive, which is why starting to look for such a position early (ideally during medical school) is important. Often Greek university faculty members have connections with their counterparts in the USA (both Greeks and non-Greeks) and can offer great help in locating such a position.

Interviewing skills

The main principles for a good interview are to be prepared, enthusiastic, honest, and to be yourself. In general, a much higher level of energy and enthusiasm is the norm in the USA, which may appear awkward to a relatively timid and down-to-earth appli-

cant from Greece or from other European countries. Some interviewers think that once invited, all applicants are about equal and their goal is to find the personalities that would be most compatible with their program. In the final ranking process, personality weighs as heavily as academic credentials. On average, each program invites ten applicants per training position.

If you know with whom you will be interviewing, it helps to learn the professional interests of your interviewer and direct the discussion to a favored topic. If you have been involved in a research project you should know every detail of that project in case you are asked. You should be prepared to answer questions such as, "Why should we offer you a position in our program?", or "What is your worst failure during medical school?". You should also have thought of an answer in case you are offered a "pre-match" position. The "KISS" (Keep It Short and Simple) principle may also be helpful to avoid errors and show that you can summarize and prioritize. Prepare intelligent and specific questions to ask the interviewer. You need to prove that you are very interested in that particular program and also learn more about the program. Finally, you should practice extensively interviewing with friends or your mentor or (especially if you can spend some time in the USA) you can consider hiring a coach.

There are several books that can provide additional information on the residency matching process; a commonly used one is Iserson's "Getting into a Residency: A Guide for Medical Students, Galen Press, Seventh Edition." Also there are several website forums (such as <http://www.prep4usmle.com>) where prospective applicants share their experience on preparing for the USMLE or about the interview process.

After starting a residency

Finding a position in internal medicine is just the beginning if you are interested in a cardiology position. Since cardiology is a popular medical subspecialty, obtaining a cardiology fellowship position is very competitive. Therefore, you need to (continue to) work hard, since the above mentioned application process starts all over. The criteria remain the same: excellent evaluations from your supervisors and your peers, and productivity in research. You should try to get involved in (preferably cardiology) research projects within the first few months of starting your residency, so that a few abstracts and hopefully papers will have been published before your cardiology interviews.

Early in your second internal medicine year, you will submit applications to various cardiology training programs, and then proceed with interviews as you did for internal medicine. In general, it is easier to secure a cardiology fellowship position in the same hospital where you do your internal medicine training. Also, it is best to pursue collaborative projects with Greek medical centers and researchers in order to identify potential options for future return to Greece, if so desired.

Conclusion

In summary, pursuing clinical training in internal medicine and cardiology (or other medical specialties) in the USA may be challenging but is feasible and can be very rewarding. Making that decision early (ideally early in medical school), and preparing systematically and thoroughly (clinical/research experience in the USA) are critical to success.

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