RESIDENT & FELLOW SECTION

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International Issues: My visiting fellowship in the United States

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The neurology residency program in Spain includes within its 4 years a 9-month period dedicated to elective rotations. Most residents stay in the same hospital or move to one nearby. Very few choose to go abroad. In fact, some departments do not allow residents to do external rotations, but more often residents themselves are not aware of this opportunity and do not take advantage of it. In my case, I had the opportunity to visit the Neurological Institute of New York and the Columbia University Medical Center of New York—Presbyterian Hospital, which ranks among America's best hospitals.²

Specifically, I spent 3 months in the Division of Stroke and Critical Care, doing what is called a "visiting fellowship," which consisted of attending and participating in the clinical and scientific activities carried out in the division. Unlike what I expected, it was very easy to get in touch with the faculty of the department and to schedule my months of rotation there. It was as easy as sending a letter with my resume explaining my field of interest.

When I arrived from Spain, I found innumerable differences. The first, and most noticeable one, is the health system, which in Spain is publicly funded and free to everyone who normally lives in Spain, while in the United States it is essentially private. Apart from doctors and nurses, American hospitals use physician assistants, who are health care providers who perform medical tasks and procedures with the supervision, but not necessarily in the presence, of a supervising physician. Moreover, in the United States, a broad range of complementary tests is almost always available. There seemed to be no problem of long waiting lists. Therefore, CT and MRI scanners were used more widely than in Spain. It seemed to me that American patients had a much wider availability of human and technological resources at their disposal compared with Spanish patients.

According to the Organization for Economic Cooperation and Development, the United States

spends much more on health care than any other country.³ The reason for this is that the United States pays much higher prices than other countries for pharmaceuticals, hospital stays, and physician visits.⁴ Moreover, looking into health care resources statistics, I discovered that the United States has more MRI scanners per capita than Spain, but that the number of hospital beds, physicians, and nurses per capita is about the same.³ I also concluded that the situation in the United States is quite different from hospital to hospital.

With regard to my personal experience at Columbia, I particularly enjoyed the plurality of views and experiences. Every year the hospital receives numerous visiting fellows, and so I had the opportunity to share my rotation with other foreign residents. Together we exchanged experiences and discussed cases with other fellows and attendings in the stroke unit. After morning rounds, everyone concentrated on a specific subject of personal interest: in my case, neurosonology. I spent the better part of each day in the Doppler laboratory where both clinical and research studies were performed. I learned different techniques, such as transcranial Doppler, CO2 vasoreactivity testing, and carotid duplex-Doppler scanning, including measurement of intima-media thickness and arterial stiffness.

Neurosonology is, of course, an important tool in the evaluation of most patients with stroke. While all these techniques are also commonly performed in Spain, it might be hard to find a place where one can learn all of them at the same time. This year, the official program for neurology residency in Spain has changed to include more neurosonology. Neurosonology is now considered a compulsory rotation, which must last at least 2 months. In Spain, neurosonology studies are performed and interpreted by neurologists, but they do not get paid for them. On the other hand, in the United States, most of the sonographic studies are performed

by trained technicians, and neurologists do the final interpretation. It seemed to me, therefore, that physicians in the United States better utilize their time by having technicians and other assistants. Although residents and fellows are able to attend the laboratory and learn the techniques, however, vascular ultrasound is not an obligatory rotation.

Finally, I learned a great deal about the different approaches to research in the United States and Spain. The United States is a leading country in medical research at all levels, and the importance of doing research seemed to play an important part in the training of the medical students I met. Each year the US National Institute for Neurological Disorders and Stroke, which is a part of the NIH, establishes a set of funding plans for research programs, based on the US Congress appropriations that total hundreds of millions of dollars.5 Some of these grants allow foreign medical students or doctors to participate in research projects. In Spain, research in medicine has been carried out with little or no government-sponsored financial aid for a long time. However, in the last few years the situation has improved with more funding provided by the government. The funding of research projects by the General Spanish Administration through the Institute of Health Carlos III and other institutions has risen almost 50% in 2005 with respect to 2004 (69 million euros vs 45 million euros), increasing the number of research projects and the budget per project.6 Moreover, Spain is a member of the European Union and participates in the research Framework Programmes that consist of multidisciplinary research and cooperative activities in Europe and beyond. From 2007 to 2013 this program has a budget of 53.2 billion euros over its 7-year lifespan, the largest funding allocation yet for such programs.7

Nevertheless, despite all these differences, I learned that when a Spanish neurologist and an American one are in front of a patient, they perform the same activities. They both ask the same questions, do the same clinical examination, have the same diagnostic approach, and generally administer the same treatment.

I had long talks with other foreign residents about our different medical practices, but we all ultimately reached the same conclusion: we work in a similar way. I found this to be a reassuring conclusion for neurologists, and for all doctors worldwide. Moreover, the core competencies included in the requirements for American Neurology residency programs⁸ are generally comparable to the competencies included in the Spanish program. Although there are some differences within the training program, health system, hospital infrastructure, and attending structures, all these variables are less important since common core competencies are achieved.

Santiago Ramon y Cajal, a Spanish histologist who received the Nobel prize for Medicine and Physiology in 1906 for his contribution to the discovery of the nervous system structure, once said: "Al carro de la cultura española le falta la rueda de la ciencia" [In the Spanish culture chariot, the science wheel is missing]. A century later, it seems to me that the Spanish chariot might have found its wheel of science, but perhaps it is still too slow. The foreign rotation is a great opportunity for residents to learn about different health systems, educational programs, and new technologies, both in order to analyze better what is being doing in one's own country and to find new ideas to improve it.

REFERENCES

- Orden SCO/528/2007 de 20 de febrero, por la que se aprueba y publica el programa formativo de la especialidad de Neurologia. BOE 2007;59:10298–10306.
- Available at: http:// health.usnews.com/usnews/health/ best-hospitals/honorroll.htm. Accessed July 11, 2007.
- 3. Anderson GF, Hussey PS, Frogner BK, Waters H. Health spending in the United States and the rest of the industrialized world. Health Affairs 2005;24:903–914.
- 4. Anderson GF, et al. It's the prices, stupid: why the United States is so different from other countries. World Health Affairs 2003;23:89–105.
- Available at: http://www.ninds.nih.gov. Accessed July 11, 2007.
- 6. Available at: http:// www.isciii.es. Accessed July 11, 2007
- Available at: http:// www.cordis.europe.eu/fp7/. Accessed July 11, 2007.
- Elkind MSV. Dr. Strangelove, or how I learned to stop worrying and love the core competencies. Neurology 2005;64:3–6.



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