
The Future of Nuclear Medicine: A Perspective from Europe

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Professor Henry Wagner's comments on Dr. Maynard's views on the future growth of nuclear medicine in this issue of the *Journal* stimulated us to add a few more remarks.

When Dr. Maynard first made his comments at the SNM 39th Annual Meeting in Los Angeles, many of us from Europe who were in attendance were shocked by his statements. The Europeans were heard murmuring—what happened, what on earth is going on? Is there a strategy for self-denial or suicide?

Over the years, we have witnessed an occasional lack of balance (the overemphasis on costly technology versus feasible technology, the era of premature abandonment of ^{123}I chemistry and the poor support given to technetium chemistry, the overemphasis on the rare rather than on common, the pursuit of the absolute rather than the practical, the overenthusiasm for the technique or tracer of the month, etc.), but the definite shock came from the dark picture painted by Dr. Maynard on the future of our speciality as practiced in the U.S. If the aim was to startle and rattle the audience, it was more than achieved. Naturally, there is no fire without smoke and many of the concerns expressed by Dr. Maynard are shared by others. However is his analysis correct and is the advertised solution appropriate? I am afraid, however, that I share many of the reservations expressed by Dr. Wagner. Why?

No medical speciality can flourish in the shadow of a watchful big brother, and this is certainly true as far as the relationship between radiology and nuclear medicine is concerned. Anesthesia had to separate from surgery, dentistry from medicine, rheumatology from orthopedics, cardiology from internal medicine—the list goes on. Medicine cannot flourish with an ever increasing fragmentation of knowledge and no fragmentation is more artificial than one based on an organ. Which organ specialist will treat a

patient with AIDS or hypertension? All or none? All is incompatible with cost-effective delivery of health care; none is no longer an ethical proposition.

When large radiology departments establish a strategy of organ-related imaging programs, it is more a result of a defensive analysis of the radiologist's role in the medicine of the 21st century than a reflection of what is best for the patient. It is the self-denial of the primary role of the physician to give holistic advice to a patient and not to his left atrium.

Radiologists are naturally concerned. There is too much to be learned in too short a period of time from too many modalities. A choice needs to be made. General practitioners will use their own ultrasound probes in their practice for abdominal and renal pathologies. Cardiologists have been carrying out their own imaging investigations for years. The same is true of others. Because of this pressure, the pressure caused by an imbalanced perspective of income and many other pressures, a defensive analysis points out to one possible strategy (there are others)—namely that of organ-related training. A new fashion has been created and it is being proposed worldwide. Forgotten is the strategy for imaging departments that caused so much harm to our own field—the wish to embrace all modalities (without the ability to develop them all at the same rate). There is now the wish to practice defensive medicine even more and narrow the field further. There have been too many examples of huge departments with excellent CT and terrible ultrasound expertise, no knowledge of nuclear medicine but exquisite chest x-ray radiology and so on. The consequent escalation in costs is inevitable.

Many Europeans believe that the real concern expressed by Maynard is that of a practitioner of radiology and not that of the nuclear medicine specialist. Nuclear medicine has its own role and its own medical service to deliver. In its earliest days, treatment was a major success story (in Europe the thyroid is not forgotten) and the present and future therapies available to nuclear medicine practitioners will add immensely to their clinical responsibilities.

Moreover, the European community has determined that nuclear medicine is an independent medical speciality and is in the process of establishing nuclear medicine boards which will help to set up minimal standards of care and practice. Audits will be developed so that patients will have the services of a qualified doctor licensed to admin-

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ister radioactive substances who is dedicated full time to his/her practice. How many patients know that their doctor has only limited experience and training and is nevertheless embarking on the administration of a radioactive substance?

There is a need to share experience, training and technical expertise in the delivery of an effective, cost-compatible service. The more fragmented the expert, the more expensive their practice will become as they are exposed to the dynamism of changing technologies. Flexibility of practice is now in demand more than ever, and not only in Europe, where a large fraction of the population has poor access to modern medicine.

Will the organ dedicated imager of the heart dictate or compete with the cardiologist in the management of the patient? The tensions will be apparent soon. I do not believe that this will serve radiology well, and I believe even less that this avenue should be pursued by practitioners of medicine who make use of the radioactive tracer principle. Nuclear medicine is perhaps nearer to the practice of internal medicine than any other specialty. Let us not diffuse our clinical strength by short-term concerns of a rapidly changing and often only technologically driven environment. The patient will benefit most by dedicated, full-time trained physicians and not from a technologically driven apprenticeship of medicine.

It is often stated that nuclear cardiology is best left to cardiologists. Forgetting the pressure of income generation and all its ugly policies, it is clear that a cardiologist is far more familiar with the pathophysiology of the heart than

the trained nuclear medicine physician. Conversely, the nuclear physician with an interdisciplinary team will have a wealth of experience to offer the cardiologist. The answer, if politics (forgive us) can be forgotten for one moment, is that by working jointly, both the cardiologist and the nuclear physician will offer the best patient service. Are we to duplicate these interdisciplinary teams for nephrologists, oncologists, endocrinologists and every one else who knock daily at our doors for collaboration and delivery of patient care? Or are we to maintain a highly trained, competent and flexible team which is at the disposal of the university and the hospital? For us the answers have been at hand for some years. In nuclear medicine, we wish to collaborate, as full partners, with radiologists and clinicians alike. We are keen in rational argument, diagnostic strategies and cost-efficient delivery of health care. We believe in as much integration as possible within clearly established guidelines which permit the independent growth of a medical speciality. We wish to practice nuclear cardiology with the cardiologist, nuclear oncology with the oncologist, nuclear nephrology with the nephrologist, and so on. A team approach that is mutually appreciative is the best solution for clinical care.

Dr. Maynard and many of the founders and early practitioners of nuclear medicine deserve our respect and admiration. In all families, however, the younger ones will have to separate from their parents at some stage in their development. What is dangerous is that institutions often make long-term decisions by those who will not suffer the consequences of their planning.