

Advanced Practice in Nuclear Medicine: A Pathway to Clinical Leadership

One of the most exciting career advancement opportunities in recent times has been the development of the advanced practice career track for nuclear medicine technologists. The office at the university where I work receives several calls a week, inquiring about advanced practice education programs, and, without fail, the callers are very enthusiastic about the positive direction in which the profession is growing. One question I often hear is, "What exactly will the advanced practice technologist do?" In attempting to describe how we envision the development of this pathway, I refer callers to the competency task list as approved by SNMITS. And I usually add something like, "Well, the nuclear medicine advanced practitioner will be similar to a nurse practitioner or physician's assistant in the nuclear medicine department." That point of reference is usually helpful, but perhaps we need to be more precise. I think we agree that being an advanced practitioner includes a set of additional clinical skills in cardiology or PET/CT. An enhanced clinical skill set will certainly be an important component of the advanced practice model; this has been discussed at length in the SNMITS. But the broader role the advanced practitioner will play in nuclear medicine, radiology, and the health care environment has not yet been clearly defined.

A few months ago I attended a conference at the University of Salford in England on the role of advanced practitioners in the imaging sciences. Sponsored by the British Institute of Radiology, the program featured speakers who have been leaders in teaching and developing advanced practice roles in the U.K. I think many of the points discussed at the conference are worthy

of consideration on this side of the ocean as well as we attempt to define our own role as advanced practitioners in nuclear medicine.

Advanced practice in the imaging sciences, including nuclear medicine, has been in place in the U.K. for about a decade. Changes in the roles of imaging specialists were impacted by severe personnel shortages, particularly physicians, which in turn opened up opportunities for radiographers and technologists to assume some of the tasks that had been strictly the purview of physicians. However, according to Maryann Hardy, a senior lecturer from the University of Bradford, advanced practice involves more than performing highly technical procedures; it also requires a high level of clinical decision-making. She suggested that the successful advanced practitioner has internalized individual and professional qualities that motivate him or her to initiate improvements in service delivery. "Improving service delivery" is, in a nutshell, the key to acceptance and adoption of advanced practice in all U.S. imaging sciences. For example, it will not be enough to be able to properly stress a patient for myocardial imaging; the outcome must also include improved service delivery for the nuclear medicine physician or radiologist, the referring physician, the practice itself, and most important, the patient. Improved service delivery may be represented in terms of reduced costs or time, improved efficiency, or an enhanced patient experience.

Hardy discussed several components of the technologist's transition to advanced practice. The first is the acquisition of new knowledge, particularly related to clinical skills, and the second is the application of knowledge to improving service delivery and overall

practice development. Improving service delivery implies that each advanced practitioner's discrete role will be different, depending on the needs of the local practice. Some nuclear medicine advanced practitioners will work in general nuclear medicine, while others may work in oncology, cardiology, or pediatrics. Contributions to overall practice development will be particularly important as the profession begins to establish clinical benchmarks and evidence-based practice.

Decision-making is the third component in the transition. Certainly more autonomy is expected of the advanced practitioner, but Hardy also emphasized that practitioners must clearly understand the types of decisions they can make and those they should not make. Although advanced practitioners will follow protocols (as do physicians), Hardy challenged the idea that there should be no deviation from the protocols; otherwise, the "decision-making" role would be rendered less effective. She said that the advanced practitioner should also be capable of deciding "what's next" after the completion of a study. If nothing else, the practitioner should be very familiar with the clinical pathway the patient can expect to follow. The advanced practitioner should be able to address the patient's questions and facilitate the scheduling of various procedures, including nonimaging procedures, to ensure a truly patient-centered experience. Think of a really effective nurse practitioner or physician's assistant and how that person shepherds the patient through an entire diagnostic experience. That should provide some insight as to the role of an advanced practitioner in nuclear medicine.

A fourth component of advanced practice is leadership, and in Hardy's

outline, this was integrated into all the other components. Those who practice clinical leadership learn to optimize everyone's role and value in the service, not just their own.

Providing service management and planning was the fifth component. Hardy pointed out that the role of department or practice manager is different from that of an advanced practitioner. The two roles may overlap in some areas of clinical responsibilities, but tasks, such as budgeting, hiring, purchasing, etc., are more appropriately done by the manager rather than the advanced practitioner.

Teaching and training staff and student technologists is another role envisioned for the advanced practitioner. Clinical supervisors with the additional qualifications of advanced practitioners would be superb assets to any nuclear medicine technology undergraduate program.

Research will also be an important role for the advanced practitioner. This means not just assisting a research scientist or physician in clinical studies, but developing and publishing original

research. A number of conference speakers believed that this would be crucial for the profession, especially for legal reasons. Case law is not yet established for advanced practice in any area of radiology. If a legal issue arose, attorneys would have to resort to case law for related advanced practice professions, such as nursing. The advanced practitioner should undertake the regular collection of practice data, establishing "best practices" guidelines and standards of care supported by clinical evidence and reported in reputable publications. Self-audits are a regular practice of advanced practitioners in the U.K. and should be considered for U.S. practice as well. To be effective, audit results should be compared against established benchmarks, which in turn will require regular collection and publication of results.

The final point made by Hardy was about recognition and expertise. Not every nuclear medicine technologist will be suited for the role of advanced practitioner, nor is that necessary for

nuclear medicine and molecular imaging to thrive as a specialty. But those who choose this pathway will most certainly be expected to demonstrate a high degree of clinical expertise. Recognition of that expertise will be earned and demonstrated in a number of ways. Completion of a formal education program and passing a certification board examination will be but two of the most outwardly visible means of recognition. The profession itself will earn recognition on its own merits as it contributes, though the practice and application of nuclear medicine diagnostic and therapeutic procedures, to a positive patient experience and effective service delivery.

Nigel Thomas of Trafford Hospital in Manchester nicely summarized the role of clinical leadership in advanced practice: Imagine what could be done tomorrow and begin working toward that goal today.

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