

Marketing Nuclear Medicine

Nuclear medicine, like other diagnostic imaging modalities, has been significantly affected by changing methods of third party reimbursement for imaging procedures. The advent of DRGs, contracted reimbursement, PPOs, IPAs, and HMOs have all had a financial impact on nuclear medicine departments. The competition from other diagnostic modalities, as well as the pressure of cost containment, has slowed the growth of a significant number of nuclear medicine departments. If our speciality is to remain viable and grow, then we need to reevaluate the way we inform and educate the referring physicians, administrators responsible for our budgets, equipment and personnel, and patients who are the ultimate beneficiaries of nuclear medicine services.

The concept of marketing nuclear medicine may evoke negative images in the eyes of nuclear medicine professionals. If we look, however, at the concept of marketing as that of informing and educating, rather than selling, we will find that there are a significant number of ways to enhance and expand the use of nuclear medicine services.

The growth of any nuclear medicine department depends upon its relationships with the referring physicians. Since nuclear medicine studies are performed only upon the request of a referring physician, it is obvious that the major marketing efforts concentrate on the referring physician. However, hospital administration, patients, and nuclear medicine personnel should all be considered as important foci of nuclear medicine marketing efforts. Let us consider each group in turn.

REFERRING PHYSICIANS

Factors to be stressed when marketing nuclear medicine to the referring physicians include quality, availability, service, and education. It should be obvious that high-quality diagnostic imaging is essential for the accurate diagnosis of clinical problems. Advances in technology, such as single photon emission tomography, dedicated nuclear medicine computers, and other improvements in nuclear medicine equipment should be acquired by the department in an orderly and planned fashion. Suboptimal images, caused by patient motion, artifact, or outdated instrumentation, should be recognized and corrected before a nuclear medicine study is interpreted. Daily quality

control, including uniformity correction, phantom studies for camera resolution, and radiopharmaceutical quality control should be a routine part of the nuclear medicine department.

Availability and service to the referring physician go hand in hand. Department hours should be sufficient to provide availability of services during normal working hours. Adequate equipment and staff is essential if this is to be achieved. On-call nuclear medicine studies should be available after normal working hours, seven days a week. Studies should not be rejected because the request is at 3:00 on a Friday afternoon and the department closes at 4:30. A nuclear medicine physician should be available to evaluate each request for nuclear medicine consultation and to do an appropriate and brief physical examination when required for further diagnostic information. Reports of other tests or imaging procedures should be available and reviewed prior to interpreting the nuclear medicine study. It is extremely important to choose the appropriate nuclear medicine procedure that will answer the clinical question being asked by the referring physician.

Once the appropriate test is completed, it is important that the results be transmitted as rapidly as possible to the referring physician. Unexpected abnormal test results are phoned to the referring physician while the patient is still in the department so that further follow-up or other studies can be scheduled, if deemed appropriate. Inpatient reports are always dictated and sent to the wards the same day the study is performed. Outpatient reports are dictated the same day of the procedure; however, a phone report is often advisable if the patient has an appointment that same day or the next, so that the results of the nuclear medicine test are known to the referring physician at the time he is evaluating the patient. Preliminary reports on studies that cannot be completed the day they are started are always dictated for inpatients; usually outpatient interim reports are not dictated but may be transmitted by phone, if requested by the referring physician. Nuclear medicine reports should be succinct and attempt to answer the clinical question raised in the consultation request. Phrases such as "... cannot be completely excluded," or laundry lists of remote or obscure diagnostic possibilities should be avoided. An ideal report should include the test performed, the radiopharmaceutical used and the route of administration, a description of the images obtained, and the presence or absence of abnormal findings. Reference should be made, if appropriate, to comparison with other diagnostic modalities, such as ultrasound, CT, or MRI, and any recommendations for follow-up or cor-

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relation with other diagnostic studies should be included. If the study is abnormal, then the report should identify the most likely cause for the abnormality and recommend any further follow-up tests or studies that would help to confirm the nuclear medicine interpretation.

Another service that is appreciated by the referring physician is the ability to remain flexible in scheduling and to work with both the patient and referring physician to either add a study to the normal work day or to schedule around a patient's work schedule or transportation availability. Flexibility in scheduling can be an important asset in marketing, particularly if the referring physicians are made aware of the willingness of the department to meet their clinical needs.

Education is another important marketing tool when dealing with referring physicians. An "interesting case file" and a "follow-up file" with results of surgery or other diagnostic studies can be extremely helpful in educating the referring physicians as to the sensitivity and specificity of nuclear medicine procedures, as well as their cost effectiveness compared to other diagnostic services. The presence of a nuclear medicine physician at scheduled hospital conferences, such as tumor board, oncology rounds, cardiac catheterization conferences, etc., is essential to staff education. Being available to discuss appropriate nuclear medicine cases at the educational conferences will not only help educate the referring physicians as to the appropriate use of such procedures, but also keep the work of your department visible to members of the medical staff. The use of outside consultants as speakers at medical staff meetings, mini symposiums, or review courses is very helpful in updating the referring physician concerning new procedures, techniques, or instrumentation. A department Open House to showcase a new camera or computer can also be used to educate referring physicians. Having examples of nuclear medicine studies placed throughout your department can remind physicians of the range of diagnostic services available. Another effective educational technique is to copy pertinent journal articles, particularly in the specialty journals outside of nuclear medicine or radiology, that relate results of nuclear medicine studies to your targeted audience. A viewbox placed in or near the doctors' lounge, with a "Nuclear Medicine Case of the Week" can also be a very useful educational tool. It is also important to tell the story of nuclear medicine to potential referring physicians early in the course of their education. Lecturing at local medical schools, particularly to the freshman and sophomore students, can be very helpful in making them aware of the role of nuclear medicine when they become interns or residents. Participating in Grand Rounds or holding a clinical faculty appointment at a local medical school can be important in reaching potential referring physicians.

It is important to remind and educate physicians using other imaging modalities such as CT or MRI as to the value of nuclear medicine studies to aid in confirming or excluding questionable findings on CT or MRI studies. For example, stress fracture may not be seen on routine x-rays until 2 or 3 weeks after they occur, whereas the bone scan will usually

be positive within hours after the fracture has occurred. Metabolic or infective processes may not be apparent on CT images, but a radioisotopic brain scan will often be positive in such cases. Additionally, patients who are allergic to iodide containing contrast media can safely be imaged with ^{131}I or ^{123}I radiopharmaceuticals without having an allergic reaction.

HOSPITAL ADMINISTRATION

In the current climate of cost containment and decreasing length of hospital stay, it is important that the hospital administration be aware of the nuclear medicine department's efforts to reduce cost and increase productivity. Significant savings in the cost of radiopharmaceuticals can often be obtained by using the services of central nuclear pharmacies. It should be clearly understood, however, that deterioration in the quality or timeliness of patient studies will not be tolerated if the services of the central nuclear pharmacy are used. Adequate availability of technetium-labeled radiopharmaceuticals should be assured for any "add on" studies or last-minute emergencies prior to the end of the normal work day, and on-call response time should be spelled out clearly to the central pharmacy for emergency studies.

Flexible staffing in the nuclear medicine department may also help reduce personnel costs, as should the use of part-time workers. However, it should be understood that flexible hours or part-time personnel will, in no way, compromise quality of care given in the department. Administration should be continually apprised of the department's needs for space, equipment, personnel, and keeping abreast of current technology. The administrator responsible for the nuclear medicine service should be visible to the department managers and should be educated as to the role of nuclear medicine in relation to other diagnostic imaging modalities. Problems in patient through-put should be identified to the administration, particularly if they involve areas such as outpatient registration, patient transportation within the hospital, and conflicts with other hospital services. Often, problems in obtaining patients for procedures can be avoided if the appropriate nursing supervisors or charge nurses are aware of the technical aspects of the nuclear medicine procedures—particularly the need to encourage fluids for bone scan patients, or the fact that the isotopes physically decay over a period of time.

In-service education programs for administrators and nursing staff can be extremely helpful in allaying fears that both patients and staff may have concerning the use of radioactive materials for diagnostic studies, as well as introducing your service to other hospital services. It is important that your administrator be aware of technologic advances in the field and you may encourage a member of the administrative staff to attend regional and national nuclear medicine meetings to review equipment, services, and future trends in nuclear medicine.

It is extremely important to discuss charges for nuclear studies with your administrator periodically since the charges for procedures should not only reflect community norms but should also be competitive with other diagnostic imaging services. You should also make administration aware that

screening procedures, such as bone mineral analysis for osteoporosis, should be set to encourage patient volume, while recovering overhead costs. It cannot be overemphasized that there should be an attitude of cooperation and mutual respect between the nuclear medicine personnel, department managers, and administration. A cooperative approach with the hospital administration is much preferred over one of confrontation and mistrust.

PATIENTS

Patient care and interaction is the most important reason for us to be involved in clinical nuclear medicine. We should not forget that patients are often frightened, awed, or confused by the myriad of technology that confronts them in a nuclear medicine department. It is our task to perform and interpret the requested studies while being aware of the needs and concerns of the patients. Patients should be addressed by last name or title, unless they indicate otherwise; they should be treated with dignity and respect and should have the nuclear medicine procedures explained to them before they undergo the study. Questions that arise should be answered as fully as possible, particularly by the technologists performing the procedure. However, questions concerning medical diagnosis, treatment, or the interpretation of the nuclear medicine studies should be referred to the nuclear medicine physician. "Shop talk" or personal discussions should not take place in patient care areas. Patients should be asked as to their level of comfort during the procedure and modifications should be made in positioning (i.e., adding pillows or extra blankets, etc.) if at all practical during the procedure to make the patient as comfortable as possible. At times it may be helpful to have relatives or friends in the imaging room to reassure the patient. This is especially true when dealing with pediatric patients. Courtesy, consideration, and an appropriate level of concern should be shown to all patients routinely and should not be considered as a marketing tool. However, too often the patient is ignored or treated as an object rather than a human being, and such inappropriate care reflects adversely on the nuclear medicine department.

NUCLEAR MEDICINE PERSONNEL

Physicians, technologists, scientists, and administrative personnel in the nuclear medicine department should consider their work a team effort in providing the highest quality of nuclear medicine services. Regularly scheduled inservice programs for the department personnel can be an excellent vehicle for keeping up to date with changing techniques or technology. Attendance at local, regional, or national nuclear medicine meetings should be encouraged. Technologists and scientists in the department should be encouraged to submit papers or exhibits to such meetings, and the department should have an educational fund to help subsidize the cost of attending.

Nuclear medicine personnel should know the referring physicians and be willing to make their studies available for review or to solve any scheduling or other problems that may arise. Participating in clinical trials for new radiopharmaceuticals is an excellent way not only to upgrade skills and provide newer imaging techniques, but it can also make the medical staff and administration aware of the department's reputation in the nuclear medicine community.

Nuclear medicine technologists should be aware of the quality of images that they are providing to the nuclear medicine physician and should not hesitate to take additional views or repeat views if the images initially obtained do not provide complete diagnostic information. Patients should not leave the department until both technologists and physicians are assured that the highest quality diagnostic images have been obtained.

Marketing nuclear medicine is not a simple or easy task; it involves a commitment from every member of the nuclear medicine team. Some departments have already implemented most of the concepts discussed here. Others may find these ideas useful in their departments. The future of our specialty depends upon our ability to educate referring physicians, administrators, patients, and nuclear medicine personnel to the benefits and uniqueness of diagnostic nuclear medicine procedures. In order to achieve these goals, we should remember that "marketing" is not a dirty word.

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