

Teaching the Human Dimension of the Technologist's Role

Because of the nature of the nuclear medicine discipline, clinical education of nuclear medicine technology students frequently emphasizes technical competence while minimizing the human dimension of the technologist's role. Furthermore, the patient-technologist interaction may appear to students and their clinical instructors as a process that is learned through some inexplicable means or after years of experience. The development of an instructional module designed to characterize the nature of patient-professional relationships and to prepare students with the necessary interactional skills to facilitate those relationships is described.

The responsibilities of a health care practitioner can be divided into two parts—instrumental acts and expressive acts (1). Instrumental acts relate to the technical aspects of clinical practice; obtaining a patient's blood pressure or performing a diagnostic image are two examples. These acts characterize the unique responsibilities of a particular practitioner. Expressive acts are common, or should be, to the practice of all health care professionals. These acts concern the human dimension of the practitioner's role in that the patient is helped to tolerate the psychological discomfort of an illness (e.g., treating the patient as a person, demonstrating empathy and warmth).

It is fair to say that many individuals enter health care fields because they derive satisfaction from helping others. However, professional education tends to stress competent performance of instrumental functions, while frequently ignoring or only casually addressing the expressive portion of the practitioner's role. This omission is particularly true in highly technical disciplines such as nuclear medicine technology. Consequently, students focus on developing technical rather than interpersonal skills. In addition, if students learn their behavioral skills from poor role models, they will acquire unsatisfactory patient-technologist interactions. Furthermore, many practitioners lack confidence in their own interpersonal skills or feel ill-equipped to instruct students in this regard.

THE INSTRUCTIONAL MODULE

How can patient-professional interactions be taught to nuclear medicine technology students? We designed an instructional module that explains the nature of the patient-profes-

sional relationship and prepares students with the necessary communication skills to produce satisfying results. Our objectives in developing the module were to: 1) place additional emphasis on the nontechnical aspect of the technologist's role; 2) prepare students for effective interpersonal responsibilities in much the same way they are prepared for their technical ones; and 3) demonstrate that expressive acts are an integral part of the technologist's responsibility which students will be expected to demonstrate as professionals.

The foundation for effective communication in the health care setting is built by exploring three subjects: 1) patient psychology; 2) basic communication skills; and 3) communication issues in health care. Approximately four lecture hours are devoted to building this foundation. First, it is important to sensitize students to what it means to be a patient. To present the emotional aspects of illness, Maslow's hierarchy of human needs is related to the psychological effects of illness (2). Fear of the unknown, pain, disability, death, preoccupation with illness, boredom, social isolation, embarrassment, loss of privacy and confidence, as well as worries relating to finance, occupation, and family needs are presented as factors that influence patient behavior and affect personality. Common reactions to illness such as anxiety, denial, and withdrawal are also discussed. To make the presentation of "what it means to be a patient" more relevant, Laws' article (3), "How Patients View the Efficient Use of Diagnostic Radiation," is required reading for students and is used for class discussion.

Second, basic communication principles are introduced. The elements of effective communication, barriers to communication, and effective listening skills are reviewed in preparation for the later key portion of the module—the technologist-patient interaction.

Finally, the foundation is completed with an examination of communication issues in health care. We use a videotaped production entitled "But Doctor You Said . . ." (4) that demonstrates many communication difficulties that arise between health care professionals and patients. Three different situations are enacted, once from the practitioner's perspective and once from the patient's. Although each vignette sometimes comically exaggerates the perceptions of each participant, the examples vividly demonstrate many communication issues in health care, such as status differences between patient and practitioner and the use of medical jargon. Through class

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discussion, students relate the communication problems depicted in the videotape to basic communication skills and patient psychology topics previously presented.

DEFINING THE PATIENT-TECHNOLOGIST RELATIONSHIP

A technologist interacts with patients in a unique way when compared with other practitioners, such as nurses or therapists, who typically develop long-term relationships with patients. Because the patient-technologist interaction is short, and occurs for a specific purpose, the need for effectiveness increases. In addition, the specialty of nuclear medicine is unfamiliar to many patients, requiring the technologist to gain the patient's confidence quickly.

To present the patient-technologist interaction in an organized and understandable way, the process is broken down into five parts: 1) greeting the patient; 2) explaining the nuclear medicine procedure; 3) listening to the patient's questions, complaints, concerns, and requests; 4) recognizing the patient's physical and emotional needs; and 5) responding appropriately to those needs.

Although the greeting is the most easily performed part of the interaction, it is important to remind students about certain aspects that may seem obvious or just good manners. Specifically, address patients using their last name unless requested by patients to do otherwise; verify proper pronunciation of patient's names; introduce yourself to establish a rapport; and greet patients with a pleasant expression. If the greeting includes asking, "How are you?", be prepared to listen. The greeting establishes a rapport that makes explanation of the procedure easier.

The need for explaining cannot be over-emphasized. The technologist must communicate relevant information about the procedure, and in words that patients can understand. Judgment must also be exercised in gearing explanations to each patient's level of understanding and need to know. Reviewing the relevant information about the procedure in a relatively private area with a minimum of distractions is an important consideration. Patients should always be given the opportunity to ask questions, and technologists should ensure that instruc-

tions, which will influence test results, are understood throughout the duration of the procedure.

Recognizing patient needs and emotional states are closely linked to effective listening. A patient's physical needs (e.g., comfort or medical intervention) are usually obvious. Personal needs that a patient may exhibit, and how those needs are manifested are also discussed. Students should be taught to recognize unspoken requests for psychological comforting by distinguishing the content from the feeling portions of patients' statements. Exploring the concept of stereotyping and how it can affect the patient-technologist relationship helps students appreciate each patient's uniqueness and individual self-worth.

Responding appropriately to a patient's immediate needs is accomplished through instrumental and expressive actions. Through technologist observation or direct verbal communication between the patient and technologist, physical needs are those that are most readily identified and satisfied. Personal needs are acknowledged by maintaining the patient's dignity, privacy, and sense of identity as a person, rather than just another patient. Offering reassurance, listening attentively, and demonstrating empathy are some of the ways technologists respond to patients' emotional needs. Because the pattern of response to personal and emotional needs is not as well defined, students may feel less comfortable answering such needs. Although these needs may be quite obvious, students often tend to ignore them, rather than risk an inappropriate response. It is also important to discuss how to respond to unreasonable demands or requests beyond the technologist's capability or authority.

INSTRUCTIONAL ACTIVITIES

The patient-technologist interaction is taught by using lecture, class discussion of the exercises we developed, and videotaped role playing. Students are introduced to the patient-technologist relationship through lectures explaining the five components of the interaction process previously discussed. To integrate the parts and demonstrate the complexity of an interaction, the following exercises or activities are designed to point out factors that influence the components of the

Exercise 1: Patient's Questions

Directions: Select four people who are not involved in health care. Ask each of them to read one story. Record their sex, occupation, approximate age, and level of education. Summarize their responses. What kind of questions did your subjects have concerning test procedures, the nuclear medicine department, appointments, other?

Story: A patient went to her doctor complaining of weight loss, nervousness, fatigue, difficulty swallowing, and insomnia. This patient also suffered from allergies and took medication daily. The doctor told the patient that he or she suspected that the patient's thyroid caused the problems. On comple-

tion of a physical examination, the doctor sent the patient to the hospital for blood tests and a radioactive iodine uptake and thyroid scan. Other than not eating any food 12 hours prior to the first visit, the patient received no other instructions or details concerning the test. The patient was told to report to the nuclear medicine department on two successive days. The doctor saw the patient again after he received the test results.

If you were the patient, would you have any questions concerning the test procedures? If so, what would your questions be?

interaction. Some of the exercises are assigned as homework, whereas others are classroom activities.

Patients' Questions

As outlined in Exercise 1, each student receives four different stories typifying patient experiences. Following each vignette are several questions pertaining to the patient's experience as related in the story. In class, students report the results of their surveys. A list of patient questions is written on the blackboard; similar questions are grouped together.

The objective of this exercise is to identify what information is commonly asked by patients, as well as that which is necessary for patients to have prior to test procedures. Patients often come to the hospital not fully understanding the nature of a test or its diagnostic value, particularly a nuclear medicine test that is relatively unfamiliar to the general public. There are basic anxieties or concerns common to all patients whether or not they have had previous hospital experience.

Listening

A three-page summary about listening skills is assigned (5), after which class discussion helps the student to appreciate how certain listening difficulties can be a deterrent to effective patient-technologist interactions. Questions used to stimulate discussion include: 1) What are common barriers to listening that a technologist might experience? 2) Toward what type of patient might a technologist have a bias? 3) How do listening barriers and biases affect the technologist's ability to communicate with, and serve patients? 4) What listening barriers and biases might patients have?

The listening exercise is designed to: 1) describe why listening skills need to be developed; 2) define and differentiate listening barriers and biases; and 3) identify listening barriers and biases commonly exhibited by both technologists and patients.

Recognizing and Responding

A quote from Laws' (3) article forms the basis of discussion about attention to patient needs. "Patients are increasingly dismayed by technologists who bustle around in a busy x-ray department attempting to look efficient but appearing to the patient to be inconsiderate, officious, and haphazard in manner."

Technical responsibilities that may make the technologist appear to be inattentive to the patient are listed on the blackboard (e.g., leaving the room to develop film or changing a collimator). A similar list of personal characteristics of the technologist is also written on the board. Students are then asked to analyze the clinical situation to suggest ways in which a technologist can minimize alienation of the patient while still attending to technical detail.

Exercise objectives include: 1) identification of personal characteristics or job-related duties that may be viewed by patients as offensive or impolite; and 2) identification of ways to improve the technologist's professional image.

Patterns of Inappropriate Response

For this activity, Long and Prophet's (6) exercise involving

examples of inappropriate response patterns is used. Each of the ten dialogues between patient and health care practitioner depict an inappropriate reply to a patient's request. Students identify why the practitioner's response is improper and suggest how it could be improved. The purpose of this exercise is to: 1) distinguish between what is actually said and what support is needed by the patient; 2) demonstrate the importance of nonjudgmental listening as one way of showing respect for the patient; and 3) provide suggestions for responding appropriately to a variety of situations.

Patient-Professional Interactions

The final written assignment is intended to prepare students for the role playing activity that concludes the instructional module. Students are asked to: recall an episode, as a witness or participant, that is an example of poor interpersonal communication in the clinical setting; describe the event; and, outline those elements necessary for effective communication in this situation.

The assignment integrates and encourages review of all concepts and skills presented in the module. In addition, it affords students the chance to organize their thinking and apply what they have learned to the clinical setting.

Role Playing

In a clinical simulation, students are given the opportunity to practice their interactional skills and evaluate their performance. Each reenactment is videotaped to permit critiquing by the participants for immediate feedback and reinforcement. Students participate in two different roles, as a patient and as a technologist. A sample script is presented in Exercise 2. One week prior to taping, the student receives two scripts for each role to be adopted. To approximate more closely the clinical situation, students see only the scripts of the characters they are to play. They may anticipate how the other player will act out a role, but it is not known exactly what the other player understands about the situation outlined in the script. The role playing is evaluated by the audience using the checklist shown in Exercise 3. At the conclusion of the role playing, the players review their own performance, incorporating comments from the observers. The videotape is then played back to review the performance in light of the comments and suggestions from both audience and participants.

In conclusion, because technical skills are stressed from the very beginning of the clinical experience, we recommend that the patient-professional interaction module be presented to students only after they have been in the clinical setting for at least three months. In addition to familiarizing themselves with the technical aspects of the technologist's role, students observe interactions with patients and become aware of many of the issues discussed in the module. Once the newness of technical functions subsides, students can concentrate on the expressive role.

Whereas much of the module's content may seem to be obvious or just common sense, students need time to place it in the clinical context and relate it to their own brief experiences. Presenting the material in small amounts over a 4-6

Exercise 2: Role Playing Example

TECHNOLOGIST SCRIPT

Study: I-123 sodium iodide thyroid uptake and scan

Patient: Deirdre Andrews (outpatient)

History: 32-year-old mother of two; in good health; on routine physical exam, small thyroid nodule palpated; received radiation therapy as an infant to shrink "enlarged thymus gland." Patient is one of many who received radiation therapy to the face, neck, or upper chest during childhood. Because of the increased risk of thyroid carcinoma in this group of people, frequent physical exams of the neck and thyroid scans, if nodules are palpated, are recommended.

Reason for study: Evaluate palpable thyroid nodule to help rule out thyroid carcinoma.

Role Responsibilities:

- greet patient
- explain procedure
- check for interfering medications or previous diagnostic tests
- perform thyroid uptake and scan
- show film to physician
- dismiss patient

PATIENT SCRIPT

Study: I-123 sodium iodide thyroid uptake and scan

Patient: Deirdre Andrews (outpatient)

History: 32-year-old mother of two; in very good health. Recently, there has been publicity concerning people with increased risk of thyroid cancer because they received radiation to the neck area during childhood. The patient sought her doctor's advice after hearing this news because her upper chest was irradiated as an infant to shrink an "enlarged thymus gland." Her physician referred her to the nuclear medicine department of a local hospital for tests. The patient did not know what was involved with the tests, only what day and time she was to report to nuclear medicine.

Role Responsibilities:

- express dismay at receiving more radiation
- state, "I can't believe my own doctor would send me for a test involving more radiation"
- question the competence of nuclear medicine personnel
- ask, "How do I know that in another 20 years you won't tell me that this test was harmful?"

Exercise 3: Role Playing Evaluation

DIRECTIONS

- I. Read the role playing script. Note any listening barriers or biases that might impede the technologist's ability to listen and communicate effectively in this particular situation.

- II. As you watch the role playing, check off only those items which the technologist demonstrates in the role playing.

A. GREETING

+ 0

1. Calls patient by name _____
2. Pronounces name correctly _____
3. Introduces self and identifies job function _____
4. Pleasant facial expression and voice tone _____
5. Receptiveness to patient's questions _____
6. Politeness _____

B. EXPLAINING

1. Location of procedure explanation
 - Waiting room _____
 - Camera room _____
2. Defines medical specialty of nuclear medicine (optional) _____
3. Includes the following essential contents of procedural explanation
 - Study name _____
 - Study description (study name explained) _____
 - Radioactive dose administration required _____
 - Route of administration _____
 - Circulation time _____
 - Side effects of study _____
 - Instructions to patient _____
 - Positioning requirements _____
 - Length of study _____
 - Instrumentation _____
 - Proximity of instrumentation to body _____
4. Checks for patient understanding and encourages questions _____
5. Explains usefulness of test procedure (optional) _____

6. Suggests modifications if patient is unable to cooperate fully _____
7. Rate of information delivery _____
8. Voice tone and volume _____
9. Relevance of information supplied _____
10. Level appropriate to patient understanding _____

C. LISTENING

1. Demonstrates attending behavior _____
Examples:
 2. Empathizes—offers acknowledgment of feelings, rather than solutions _____
- D. RECOGNIZING: Put a "+" next to patient's needs recognized by the technologist. Put a "0" next to those not recognized by the technologist.

Physical Needs	Personal Needs	Emotional Needs
_____ Temperature	_____ Dignity	_____ Fear
_____ Comfort	_____ Privacy	_____ Trust
_____ Difficulty breathing	_____ Appearance	_____ Anger
_____ Other (specify)	_____ Other (specify)	_____ Other (specify)

E. RESPONDING

1. Establishes a rapport with patient _____
2. Communicates with patient throughout procedure to explain, calm, and elicit cooperation _____
3. Encourages and reassures throughout procedure _____
4. Discusses study findings or medical record with, or in front of, patient _____
5. Informs patient of whereabouts when leaving room _____
6. Demonstrates an inappropriate response _____
Example:

week period facilitates assimilation and permits students to apply these principles in the clinical setting. Furthermore, active involvement of students in class discussions, which is a particularly suitable teaching technique for this type of material, requires that students have some direct experience in patient interaction.

Effective nuclear medicine technologist training includes introducing students to important interpersonal skills as well as teaching competent technical practice. An instructional module, such as the one described, develops interpersonal skills and instills confidence to enable students to deal with the psychological aspects of patient care. In addition, it provides the basis for a professional value system students develop after entry into clinical practice.

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