

■ Professional Development Program for Technologists

Lack of respect and job recognition often have been cited as contributing factors to personnel shortages in nuclear medicine technology and other allied health fields. The Du Pont Nuclear Medicine Technologists Advisory Board was formulated to promote programs that deal with the image of nuclear medicine technology. In an effort to address the need for professional image enhancement, the Board has devised the "Nuclear Medicine Technologist Professional Development Program," a comprehensive and informative guide for preparing and conducting workshops that address a variety of topics such as: professionalism; patient relations; standards; customer focus; and knowledge/expertise.

Designed to be used by any nuclear medicine technology professional, the program is organized into three parts so that workshops can be developed to meet specific learning objectives. Part I contains tips for effective training workshops; Part 2 lists program topics and suggested learning activities; and Part 3 offers activities and exercises that actually can be used in a workshop. Sample workshop outlines also are provided.

Versatility is a key asset of the program. David B. Pendleton, Program Director of Customer Support at Du Pont stressed this point. "The program's flexible structure means that workshops can be custom-designed for a particular situation." The program matches specific learning objectives with appropriate workshop formats (e.g., if the primary learning goal is resolving relevant issues then possible workshop formats could take the form of a case study or a discussion). The "pros and cons" of various types of presentations also are presented. "The customer focus workshop," Mr. Pendleton noted, "is very effective in that it has technologists view their jobs from the customer's perspective." When asked if one workshop was more effective than another, Mr. Pendleton main-

tained that each workshop was equally effective since they aid in enhancing professional skills and improving the image of nuclear medicine technologists.

Board members have tested the program by conducting trial workshops. The Board's suggestions and changes will be incorporated into the document. Mr. Pendleton stated that the program will be available for printing and shipping once these changes have been made. An announcement about the program was included with the Nuclear Medicine Week Guidelines mailing. Mr. Pendleton reports that he has received 40-50 requests for the program. In addition to Mr. Pendleton, other Advisory Board members are: Marcia R. Boyd, CNMT; Author J. Hall, CNMT; Shelley D. Hartnett, CNMT; James K. Langan, CNMT; Donna Marciano, RT(N); Virginia M. Pappas, CAE; Nancy C. Post, CNMT; Bardley K. Pounds, CNMT; John J. Reilley, CNMT; and Patricia Wells, CNMT.

To request the program contact: David B. Pendleton, Program Manager, Customer Support, Du Pont, 331 Treble Cove Road, N. Billerica, MA 01862.

■ Student Recruitment to Combat Shortages

"Unless educators in league with employers and professional associations are successful at fostering an interest in allied health careers among qualified students, both the programs and the allied health workforce will weaken" (1).

Increasing the number of qualified students in nuclear medicine technology and other allied health fields has been viewed as an effective measure in combatting the current imbalance in practitioner supply and demand. Pinpointing specific target groups and developing appropriate marketing and recruitment strategies becomes essential, particularly in view of the following statistics (2):

1. There were more than 30 million people between the ages of 18 and 24 available for work in 1981.
2. By 1995, there will be only 24 million.
3. Business and the military compete for 44% of this age group who do not pursue postsecondary education.
4. By 1995, the military will need one of every three high school graduates, instead of the one in eight it currently recruits.

The Bureau of Labor Statistics (BLS) notes the growing rise of the health care industry. According to BLS data, there were 7.6 million jobs in health care in 1986; by the year 2000 there will be 10.8 million. Furthermore, by the year 2000, 42% of health care jobs will be in hospitals, reflecting a growth of 1% a year. Section data have projected that the need for technologists will increase 65% by the year 2000.

The competitive demands placed upon the decreasing population mentioned earlier raises the question, "Where are the future nuclear medicine technologists?" A review of the current state of nuclear medicine technology training programs and of currently used recruitment strategies provides some possible answers.

Current State of Nuclear Technology Training Programs

The most recent Committee on Allied Health Education and Accreditation (CAHEA) data for nuclear medicine technology list that there are 106 programs operating at 63% capacity (3) (see Table 1). Sheila Rosenfeld, MA, CNMT and a member of the Joint Review Committee on Education Programs in Nuclear Medicine Technology recently stated that the current CAHEA data provided some encouraging news in that "the trend in program closures is stabilizing." "Our goal now is to fill existing programs to capacity and increase the number of programs." The 63% capacity figure is doubly important in light of recent NMTCB data. The

**TABLE 1. CAHEA
Statistics on Nuclear
Medicine Technology
Programs
(Academic Year 1987-1988)**

Number of programs	106*
Enrollment	956†
Enrollment capacity	1,507
Number of graduates	453
Percent capacity filled	63%

*Breakdown of institutions sponsoring programs is as follows: Academic health center/medical school, 25; Junior or community college, 19; hospital or medical center with 300-499 beds, 7; Hospitals or medical centers with 500+ beds, 30; Non-hospital health care facility, 1; Four-year college or university, 18; Veterans Administration, 5; Vocational or technical school, 1.

†Of this number, 871 are enrolled in full-time programs; 85 in part-time programs.

NMTCB recently stated that there has been a 38% decrease from 1985-1988 in the number of students taking and passing its examination. Ultimately, decreases in enrollees and prospective examinees result in fewer practitioners.

Implementing Recruitment Strategies

Promoting and marketing nuclear medicine technology as a career to the widest possible audience is essential to ensure a future supply of technologists. Targetting the audience and developing appropriate recruitment tools is key. The recent student recruitment seminar sponsored by the Section's Academic Affairs Committee at the Annual Meeting instructed participants in developing strategic plans for recruitment and discovering ways to vitalize promotional materials. Shirley Ledbetter, CNMT, seminar moderator, stated that "finding your audience is important in relation to the marketing tool used." "A brochure for a high school student," she noted, "might would have a different look than one for a college student."

Where do you find prospective technologists? Minorities, early retirees, and other nontraditional applicant pools have been designated as a possible source for students. The Institute of Medicine's

study suggests recruitment of students should begin in the early primary grades. Marketing the field to college students in other disciplines such as biology or premed are a possible source. Jim Langan, CNMT, stated "we have to go after nontraditional students and project positive aspects of the profession."

New developments for reaching students were stressed at the recent American Hospital Association (AHA) seminar on practitioner supply/demand. To improve the image of health professions as well as the health care field, discussion during the seminar noted the following: (1) marketing health careers should be linked with societal issues that affect the general population; (2) marketing efforts should be directed towards science, biology, and computer instructors; and (3) the military may be a possible source of trained personnel who frequently move into other careers when service is completed.

Declining enrollment numbers in technology programs have been at-

tributed to a number of factors such as fear of AIDS, public misconceptions about radiation, and the development of opportunities in other non-allied health fields. "Getting the word out is important," Ms. Rosenfeld stated. "As educators we have to talk about the opportunities available in the field. I know that some people think that salary is an issue, maybe for retaining technologists, but not necessarily for recruiting. I tell [prospective] students that a career in nuclear medicine technology offers immediate job opportunities, job recognition, and professional identity."

Promoting the field also includes communicating about it in language that people can understand. As Ms. Rosenfeld noted, "nuclear medicine is unique not only in the specialization but in that many of the people we talk to do not know what it is. People know other fields such as respiratory therapy, but they don't know this one." "It is important," Ms. Rosenfeld concluded, "to relate the technical terms to things within the audience's general knowledge."

Recruitment tools may include one or more of the following:

- **Audiovisual programs**—The Section is currently developing a video from footage taken at the Annual Meeting. In a recent interview, Mark Crosthwaite stated that the final product would be a 5- to 10-minute video on what is nuclear medicine. The program is devised in a three-part format featuring interviews with technologists, examples of equipment, and a nuclear medicine procedure. Mr. Crosthwaite also stated that recruitment videos also have been produced by nuclear medicine technology programs at the University of Alabama, Johns Hopkins and George Washington University.
- **Brochures** are an effective means of providing career information to prospective students. The Summit on Manpower is currently investigating funding for producing and distributing a brochure of all radiologic careers on a national level.
- **Print Media**—Articles in various newspapers and magazines may be effective

in recruiting students. Ms. Rosenfeld noted that an article she wrote for the local paper was adapted for national syndication.

- **Television and Radio**—Local television and radio stations, particularly television, may offer opportunities in promotions through public service spots or interviews on local talk shows.

- **National Advertising Campaign**—The Summit is currently exploring the possibility of mounting such a campaign through the National Ad Council, a non-profit ad agency which provides funds for approximately 36 campaigns a year.

- **Career Days, Health Fairs, Open Houses**—have been used as effective means of providing information about the field. Because of the influence parents have on career decisions, making information known to them has been stressed lately.

- **Scholarships and Grants**—Although appropriation of Title VII funding has not been done, scholarships and grants for students are effective recruitment strategies. The nuclear medicine technology program at City University of New York, for example, is offering scholarships to students in the amount of \$500 to \$1,000 a semester, plus additional monies for books and supplies. Funding of these scholarships is part of the Minority Honors Program in Energy-Related Careers by the U.S. Department of Energy, Office of Minority Economic Impact.

Eleanore Tapscott

Managing Editor, *JNMT*

References

1. Technologist section responds to IOM study on allied health. *J Nucl Med Technol* 1988;16:228.
2. Diverse recruitment efforts essential. *Allied Health Education Newsletter* 1989;20(3):1.
3. The fact sheet and the CAHEA system. *Allied Health Education Fact Sheet* March 1989.

■ JNMT Outstanding Paper Award

George J. Dydek, Peter W. Blue, and Harry N. Tyler, Jr. are the recipients of

the *Journal of Nuclear Medicine Technology* Outstanding Paper for 1988 award. Their winning paper, "Comparison of Attenuators for Linearity Testing of the Dose Calibrator," which assesses the performance of two commercially available attenuator devices used for dose calibrator linearity testing, was selected from over 30 submitted entries. Papers were judged on their educational utility, innovation, timeliness, and method of publication by the *Journal's* Associate Editors.

Major Dydek, a nuclear pharmacist, received his undergraduate training at Northeastern University College of Pharmacy in Boston. He is currently enrolled in that institution's graduate program for a Doctor in Pharmacy degree. The idea for the paper was conceived and researched while he was employed at Fitzsimons Army Medical Center in Colorado.

Co-author Peter W. Blue, MD, COL, MC completed undergraduate work at Michigan State University and attended

medical school at the University of Chicago. He was an intern in internal medicine and endocrinology at the University of Iowa and was a recipient of a nuclear medicine fellowship at Walter Reed Army Medical Center. Assistance with the physics and statistics used in the paper was provided by Mr. Tyler, a physicist in the Denver area.

The *Journal* is a useful and viable forum for disseminating a wide range of information on nuclear medicine technology. *JNMT* Editor, Susan Weiss, CNMT, a former recipient of the award, cites Major Dydek's paper as "a fine example of work that a technologist has done to provide better patient care. Since the research had been done, it was a superb idea to share the information and results in the form of a journal article." Ms. Weiss further stated that "other technologists are encouraged to share their findings on changes in technology or tips on performing a particular procedure by submitting articles for publication." Moreover, previously published authors as well as first-time authors are encouraged to submit articles. "The editorial staff," Ms. Weiss concluded, "is available to assist first-time authors in preparing manuscripts."

Presentation of the award was made during the Technologist Section's business meeting in St. Louis. As primary author, Major Dydek received a plaque inscribed with the authors' names and a \$100 honorarium.

■ Summit Update

Marketing and recruitment strategies were emphasized during the recent Summit on Manpower meeting held in May. Much of the discussion focused upon the importance of a professional image and its effect on both recruitment and retention. The need to create a positive awareness of the profession was viewed as a primary objective. Marketing strategies for achieving this would include: (a) designing recruitment campaigns targeted to specific groups (i.e., high school students, minorities, older workers); (b)

highlight key selling points for radiologic careers such as intellectual stimulation, opportunities for specialization, exciting high technology with meaningful patient contact, and job mobility; and (c) alleviating public fears and misconceptions in regards to health hazards in radiologic careers. Funding for activities such as a national television ad campaign or development of local speakers' bureau listings could be accomplished through grants and monies from associations and suppliers. According to Jerry Cirino, Marketing Manager at Picker International, "companies will be responsive as they have a vested interest in an adequate supply of technologist manpower."

The Summit in association with the Massachusetts Hospital Association is conducting a job satisfaction survey pilot project in Massachusetts. Data analysis of the survey form which utilized mailing lists from the ARRT, NMTCB, and ARDMS, should begin in August.

During the meeting it was suggested that the Summit produce a document on strategies used to deal with the technologist shortage. A task force appointed by a subcommittee of the data focus group will write the report.

Development of both a marketing and finance plan as well as reports of coping strategies will be discussed at the next meeting of the Summit in the fall.

■ Annual Meeting Highlights

Technologists were well represented at the 36th Annual Meeting in St. Louis. Over 6,000 professionals were in attendance, of which approximately 900 were technologists. As in past years, the Technologist Education program included scientific paper sessions, continuing education courses, and special workshop sessions. Of notable interest was the Technologist Management Seminar, which assisted management professionals in developing skills needed to increase personal and organizational success. An offering in

the Society's program, The College Chapter Bowl, in which the Missouri Valley Chapter challenged the Central Chapter in a quiz session, also was well received.

The technologist shortage continues to be an important issue facing the Section as evidenced by various reports presented during the National Council meeting. Of particular note was a summary of a forum conducted by the American Society of Allied Health Professions (ASAHP) in which the strategic allied health data initiative (SADHI) was developed. The goal of SADHI is to provide a format for standardized data collection to be utilized by various allied health organizations. Mention also was made of a White House briefing, sponsored by ASAHP, in which appropriations for Title VII funding were addressed. A resolution by the Socio-Economic Affairs Committee proposed the appointment of a Task Force on Manpower for the purpose of resolving the current technologist shortage. Although there are several committees working on this issue, it was felt that the Section would achieve more effective results by coordinating the efforts of several committees into one Task Force.

Other business before the Council included the rescheduling of committee meetings to alleviate travel and time constraints for members attending the Annual Meeting and the Mid-Winter meeting. It was also announced that the Society and the Section would share jointly in revenues generated from nuclear medicine week promotions. A career ladder model was presented for review and comment by the Socio-Economics Affairs Committee. The model provides a "structure within which technologists can achieve the level of competence and responsibility they desire."

■ News Briefs

Radworks

Phase II of the Radiology Workload Measurement (Radworks) study by the American Hospital Radiology Ad-

ministrators is on schedule with the exception of the pediatrics studies. Phase II when completed will include ventilation and lung perfusion imaging in addition to five nuclear medicine studies contracted by the Section. The five studies are hepatobiliary, cardiac first-pass, cardiac gated, thyroid uptake and scan, and inflammatory imaging with gallium or indium labeled white blood cells.

AHA Survey on Human Resources

The American Hospital Association (AHA) recently released survey results that quantify vacancy rates for 20 personnel categories and identifies the impact of labor shortages on 3,001 hospital respondents, a 43% response rate based on the 7,064 hospitals surveyed. A cooperative project of the AHA Department of Human Resources, Office of Legal and Regulatory Affairs, and the AHA Hospital Data Center, the survey was designed to collect information on shortages in 20 specific personnel categories, the strategies used to respond to shortages, and the effects of shortages on hospital services. Nuclear Medicine technology, which is frequently grouped with radiology technology, was one of the survey categories. Earlier this year, the AHA was the sponsor of a seminar, addressing the Health Care Practitioner Supply/Demand Dilemma, in which representatives from over 60 professional associations, educational organizations, government agencies, and credential agencies met to focus upon collaborative approaches to correct the current imbalance between supply and demand for health care practitioners.

States Enact Manpower Laws

The Allied Health Education Newsletter recently reported that as of late 1988, 27 states had enacted manpower laws geared towards alleviating shortages of health professionals, particularly in direct patient care.