

**Using professional development opportunities to advance your nuclear medicine career**

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**Brief Title:** Advance your nuclear medicine career

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## **Abstract**

Nuclear medicine technologists (NMT) have multiple opportunities to advance their careers beyond an entry-level technologist. Many careers that NMTs can obtain require additional skills, education or qualifications. Participating in professional development (PD) opportunities is necessary to acquire the skills necessary for career advancement. Professional development opportunities can come from professional societies or organization, be sponsored by an institution or employer, or come from participating in an educational degree program or advanced certificate program. The type or types of PD that an NMT should engage in will be unique for the type of position she or he is striving for and current skills, knowledge and educational level. The advantages and disadvantages of each type of PD should be considered by NMTs who are wishing to advance their careers and select the development path that is most suited for her or his needs.

**Keywords:** professional development, continuing education, career advancement

One aspect of the nuclear medicine profession that should be leveraged to attract more individuals to the field is the vast number of career opportunities a nuclear medicine technologist (NMT) can pursue. People who graduate from an entry-level nuclear medicine technology educational program have the ability to develop their career from the foundation of being a staff NMT. These opportunities include, but are not limited to: department manager/supervisor; radiology manager; hospital administration; NMT education faculty; NMT program director; equipment sales; and vendor applications specialist.

Many of these careers require the NMT to advance her or his education level, knowledge or skill set beyond what is provided in an entry level NMT education. For example, the Joint Review Committee for Education Programs in Nuclear Medicine Technology's (JRCNMT) July 2018 *Accreditation Standards for Nuclear Medicine Technologist Education* states that the minimum requirements to be an NMT program director include holding a master's degree from a regionally or nationally accredited college or university, have four years of experience as a certified NMT, and have at least one year teaching experience (either didactic or clinical) (1). To achieve these minimum standards, an NMT must engage in one or more forms of professional development.

Professional development (PD) is the advancement of expertise or skills in a particular profession through a continuing education program (2). Professional development activities can be obtained through the following sources: professional organizations (including professional journals/literature, and meetings/conferences related to the organization), institutional sponsored programs, and attending a formal educational program (3). The type of PD an NMT engages in needs to be individually tailored based upon the career aspirations and current skill and

knowledge level of each NMT. A summary of each type of PD and the advantages and disadvantages is shown in table 1.

### **Professional organizations**

Most healthcare professions have their own individual national (or international) professional organizations or societies (4). The main benefit of utilizing professional organizations for PD is they convey specific information related to the profession. Nuclear Medicine Technologists rely on the Society of Nuclear Medicine and Molecular Imaging (SNMMI, <http://www.snmmi.org>) as a primary source of news, information, and development opportunities. The pinnacle of most professional organizations is a national annual meeting where experts across the field convene to discuss current trends and future innovations of the profession (5). In addition to the annual meeting, most professional organizations have monthly publications which contain peer-reviewed articles about topics related to the profession. Websites, list-serves, and newsletters are other methods professionals can utilize to collaborate with other experts in the field (4).

The SNMMI provides specific PD offerings for NMTs to help career advancement. The SNMMI hosts an annual national meeting that allows technologists to participate in PD, continuing education, and connect with peers/mentors. The SNMMI also offers a Leadership Academy to provide specific leadership development to technologists who have high leadership potential. Additionally, several online resources such as journals, teaching cases, and certification examination study guides are provided, all with the intention of helping advance the technologist's career.

Professional organizations are typically the first choice for people who wish to receive PD that is specific to her or his profession. The main advantage of participating in PD from a professional organization is the organization can identify trends within the profession quicker than any other method (5). Professional organizations also are a source of access to peers who have progressed their careers and can serve as mentors.

Utilizing professional societies for PD does have a few disadvantages. First, membership in a professional society can be very costly and, depending on employer policy; the cost may be the responsibility of the individual (3). If cost is a factor, the individual might not be able to take advantage of all the services a professional society has to offer. Another potential issue is the location of the annual national meeting. Some CTE instructors may not be able to travel to the meeting on a consistent basis because of distance or cost considerations.

### **Institution-sponsored**

Institution-sponsored PD are activities that are organized and occur within the walls of the hospital or place of employment. In most cases, institutional PD is organized and monitored by an internal or department (6). The PD committee or department typically has a budget approved by the administration of the organization with the size of the budget varying greatly among various institutions.

Professional development occurring at the institutional level is typically related to skills to be successful in a particular employment setting. The PD committee requests feedback or input from team members on content areas and develop activities to meet the needs of the team (6). In most cases, institutional PD is often led by an internal member of the organization with expertise on a specific topic (e.g., leadership development).

Technologists working at a hospital or radiology clinic may have an opportunity to cross-train in other departments like computed tomography (CT) or magnetic resonance imaging (MRI). Cross-training is a form of on-the-job training and can provide a pathway to eligibility for certification through the American Registry of Radiologic Technologist (ARRT) in CT or MRI.

The main benefit of institutional PD is that it is usually the least costly of any PD activities described in this article. The activities are held in a classroom or conference room at the institution and money is not needed to pay for travel. Sometimes institutions incur costs to bring an outside speaker into the facility, but those costs are significantly less to send large numbers of employees to outside meetings or conferences (3).

Like professional society PD, institutional PD does have disadvantages. The amount of PD related to technical skills (e.g., something specific for NMTs) usually does not occur at the institutional level because technical skills vary by profession. Another disadvantage is this approach is very broad and might not be relevant to all employees of the institution.

### **Courses and seminars**

Courses and seminars are the final types of PD that this article will explore. Enrolling in college courses is another option for individuals to obtain PD for career advancement. The courses can either be individual courses related to a specific topic, or they could be part of a plan of study toward an advanced degree (5). The main difference between enrolling in a course versus a seminar is that a course usually is for college credit and a seminar is not. Any courses or seminars that an NMT enrolls in needs to fill the gap in knowledge, credentials or degree level necessary for the desired advancement her or his career. For example, if the goal is to become an

NMT program director, and the highest level of education that has been obtained by the individual is a bachelor's degree, she or he would need to enroll in an academic program of study that concludes with the conferral of a master's degree.

The delivery of the courses and seminars has evolved over the last several decades. Traditionally, courses and seminars were held in classrooms or dedicated conference locations. The date(s) and location(s) of courses and seminars may have been a barrier for participation due to work and family commitments. Today, academic courses, degree programs, and seminars may be attended virtually through hybrid or entirely online formats. Many colleges and universities have online course and degree options that are tailored to working professionals through asynchronous course attendance. Professional societies, like the SNMMI, provide online seminars, audio lectures, and PD.

Like the previously mentioned activities, enrolling in courses and seminars does have its disadvantages. Taking a single course or enrolling in an advanced degree program can be extremely time-consuming. It can be difficult for NMTs who have fulltime employment to manage their career as well as the responsibilities of being a student (7). If the NMT's work schedule conflict with the time a course is offered, it may be difficult to complete the educational program. Finally, tuition is a major barrier from people to pursue courses or seminars. Some employers have tuition reimbursement policies that cover part or all of the cost associated with course enrollment if it directly improves the employee's skill set or addresses a specified need within the organization (5). However, due to the current financial hardships of many healthcare organizations, tuition reimbursement has been dramatically reduced or cut altogether resulting in the individual being responsible for covering the costs.

## **Conclusion or Summary**

When evaluating career progression opportunities, the most basic consideration that an NMT needs to consider is what skills, degrees or credentials she or he needs to possess. It is likely that career advancement will require participating in most or all of the types of PD identified in this article. Although the path for career advancement is going to be unique for every NMT who wishes to advance to the next stage of her or his career, here are some recommendations for obtaining the development necessary for career advancement.

As mentioned, professional organizations like the SNMMI are a great resource for PD and include a community of members who are at various career stages. With your career path in mind, it is recommended to find someone within the SNMMI who has a role similar to what you are trying to obtain and ask them to serve as a mentor to guide your career development. Mentors can be extremely beneficial for sharing how they advanced their career and can provide insight as to what type of PD were most valuable to them.

Educational degree or advanced certificate programs are the PD opportunities that take the most amount of time to complete. A recommendation would be to begin your PD with enrolling in an educational program that leads to an advanced degree. Most NMT career paths, like education or hospital administration, either require or highly recommend master's level (or higher) degree. Even if the career you are seeking does not require an advanced degree, having obtained the degree can differentiate you from other individuals striving for the course.

Finally, it is recommended that NMTs take advantage of any PD that your employer offers. Most medium-to-large size healthcare organizations have an organizational development department that conducts PD activities for employees of that organization. Participating in



institutional-sponsored PD creates visibility for you within the organization and it is a clear indication that your intentions are to advance your career.

The career possibilities for NMTs are numerous and participating in the various forms of PD can provide the skills and expertise necessary to qualify for those careers. For NMTs who wish to advance their careers, developing a personal PD path can lead to the career she or he desires.

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**Table1**

<b>Type of Professional development</b>	<b>Advantages</b>	<b>Disadvantages</b>
Professional organizations	Closely related to profession	Costly, travel to annual meeting
Institutional-sponsored	Most cost efficient, local	Very broad topics
Courses or seminars	Leads to a degree or credential	Very costly and time-consuming