The American Registry of Radiologic Technologists (ARRT) is the largest national, voluntary certification organization for radiologic technologists, with 235,000 registered technologists and an annual examination volume of 20,000 to 25,000. The ARRT’s board is appointed by the ACR (four members) and the American Society of Radiologic Technologists (five members). The ARRT is in the process of developing a certification for radiologist assistants. Standards of education, ethics, and examination will be adopted to identify individuals qualified to assume this new role. The program is scheduled to be available in the fall of 2005.

Key Words: Physician extenders, radiologist assistant, certification


INTRODUCTION AND BACKGROUND

The American Registry of Radiologic Technologists (ARRT) is developing a certification program for radiologist assistants (RAs). To develop a credentialing program, the ARRT will need to set standards defining the qualifications of RAs. Although the ARRT is collaborating with other organizations in developing standards for RAs, ultimately, it is the ARRT’s responsibility to set the RA certification standards, because it is the organization issuing and standing behind the credential. This makes the ARRT a keystone in the conceptualization of the RA.

The ARRT is a national, voluntary certification organization formed as a not-for-profit corporation, with headquarters in St. Paul, Minnesota. The organization’s mission is to promote high standards of patient care by recognizing qualified individuals in diagnostic medical imaging, interventional procedures, and radiation therapy. As implied by its mission, the ARRT is an umbrella organization providing certification in all areas of radiologic technology: radiography, nuclear medicine technology, radiation therapy, and 10 subspecialties (mammography, cardiovascular interventional technology, computed tomography, magnetic resonance imaging, quality management, sonography, bone densitometry, vascular sonography, vascular interventional technology, and cardiac interventional technology). The ARRT issues the designation “RT,” which stands for registered technologist, to those meeting its standards. The ARRT currently has 235,000 individuals registered and administers 20,000 to 25,000 certification examinations per year. In addition to meeting the initial certification requirements, RTs must meet ongoing ethics and continuing education requirements to maintain registration of their certifications.

The ARRT’s primary responsibilities are certification and registration. It does not provide any of the services associated with a professional membership society, such as hosting national meetings, political lobbying, publishing scientific journals, or conducting other socioeconomic activities. In fact, the ARRT is very apolitical in nature. The ARRT is sometimes confused with the American Society of Radiologic Technologists (ASRT), which is the largest professional membership organization for radiologic technologists and serves the normal functions of a membership organization. The ARRT and the ASRT collaborate on many projects, but they are separate organizations with separate missions and separate governing bodies. One way to think about the difference is that the ARRT is to the ASRT as the American Board of Radiologists is to the ACR.

The Radiological Society of North America (RSNA) and the ARRS, working jointly, established the ARRT in 1922 to identify qualified x-ray technologists. The RSNA took over responsibility for appointing members to the ARRT’s board shortly after the ARRT’s creation and continued to do so until 1936. Until 1936, the ARRT functioned in many ways like a committee of the RSNA. In 1936, the ARRT decided to officially incorporate as an independent organization. As part of the incorporation process, the ARRT’s board was reorganized to allow both the RSNA and the ASRT to appoint to the board. In 1942, the RSNA decided that it would be more appropriate for the ACR to appoint to the ARRT’s board, and this change to the ARRT’s bylaws was made [1].
The ARRT currently has a 9-member board of trustees. Four trustees are appointed by the ACR. The remaining five are appointed by the ASRT. Each trustee serves a 4-year term, with a maximum of two terms allowed. Once appointed to the board, a trustee’s duty is to serve the mission of the ARRT. The board oversees the organization’s operations and sets policy for the organization, including the adoption of requirements for certification and registration.

The current ACR appointees to the ARRT’s board are as follows:

- Edward I. Bluth, MD, FACR, ARRT president, Ochsner Clinic Foundation;
- Timothy R. Williams, MD, FACR, Lynn Regional Cancer Center;
- Lawrence E. Holder, MD, ARRT secretary, University of Florida/Shands Jacksonville; and
- Jordan B. Renner, MD, FACR, University of North Carolina.

The current ASRT appointees to the board are as follows:

- Charles M. Washington, BS, RT(T), FASRT, M. D. Anderson Cancer Foundation;
- Shirley L. Pinette, MS, RT(R)(M)(Q(M)(ARRT), ARRT treasurer, Yale-New Haven Hospital;
- Anne Chapman, RT(R)(N)(ARRT), CNMT, ARRT vice president, Immanuel St. Joseph’s Mayo Health System;
- Bette Wilson, MAEd, RT(R)(CT)(ARRT), RDMS, University of Alabama at Birmingham; and
- Michael DelVecchio, BS, RT(R)(ARRT), Brigham & Women’s Hospital.

A 42-member staff conducts the day-to-day operations of the ARRT. The staff includes six RTs who are certified in various modalities and three PhD-level psychometricians. Psychometrics is the branch of psychology that, among other things, devises procedures to assess knowledge, skills, and abilities.

**RA CONCEPT**

In the early 1990s, the Department of Defense approached Weber State University in Ogden, Utah, to suggest the development of a program to train radiologist extenders to address the shortage of military radiologists. Before the program could be finished, the Defense Department’s priorities changed, and it pulled funding from the project. Weber State felt that there was a need for individuals trained as extenders outside the military and continued program development. This eventually led to the Weber State radiology practitioner assistant (RPA) program. On another front, the ACR was studying the radiologist shortage in the United States and raised the question of how access to services would be maintained while keeping diagnostic medical imaging procedures within the “house of radiology.” In addition to the shortage of radiologists, there was a shortage of technologists. Ways to retain technologists in the profession and to recruit more technologists were being sought by the ARRT. The development of a technologist clinical role at a higher level than currently existed was felt to be one avenue to address the challenges created by radiologist and technologist shortages [2].

Weber State admitted its first class for radiologist extenders in 1996. It has since graduated about 100 students. The title adopted by Weber for these extenders was “RPA” [3].

The Certification Board for RPAs (CBRPA) was established as a nonprofit corporation “to recognize the educational standards of individuals who have completed a recognized and approved program of study at a baccalaureate or graduate level and to certify and register individuals who have successfully passed the CBRPA certification examination” [4]. The CBRPA has certified approximately 100 individuals.

A professional society, the National Society of Radiology Practitioner Assistants, was organized to serve the needs of the newly graduated and certified RPAs. This society provides educational opportunities, meetings, and other services typically associated with membership societies.

The established national organizations were not involved in the development of the RPA model, which has restricted the recognition and acceptance of RPAs.

The ASRT organized an RA advisory panel in early 2002 to help identify and address issues surrounding the establishment of a radiologist extender role having support and input from national organizations. The ASRT, ACR, ARRT, and others participated in the panel. The panel met for the first time in March 2002 and developed a white paper [5]. Among other things, the title of “RA” was agreed on. The ACR, ASRT, and ARRT now have all endorsed the concept of RAs as developed by the RA Advisory Panel.

In general, an RA’s role falls between the traditional role of a technologist and the role of a radiologist. Examples of duties include various patient assessment, management, and care duties, as well as selected imaging procedures traditionally performed by radiologists. Significantly, the role of RAs is not intended to include interpretations and will not include working independently of radiologists.

**ARRT CERTIFICATION STANDARDS**

To assess the qualifications of individuals to perform these duties, the ARRT will identify certain standards
that must be met and will devise mechanisms to assess the standards. All ARRT certification programs include three types of standards. These are education, ethics, and examination. The ARRT will develop standards addressing each of these three areas. Only individuals meeting all three requirements will be eligible for ARRT certification as RAs. Each of these three types of standards is briefly addressed.

The ARRT does not develop standards in isolation from the professional community. Input will be sought during each cycle of the standards development process. The direct work on drafting standards will be done by an advisory committee appointed by the ARRT’s board. Drafts will be disseminated to the community for comment. Although much of the work will be done by the committee, the ARRT’s Board of Trustees is responsible for adoption of the final standards for RA certification.

**Education**

Eligibility for ARRT certification will require graduation from a recognized RA program. Programs must include both a didactic or classroom component and a clinical education component. The ASRT has drafted a curriculum [6] for RA programs, and it was favorably reviewed by participants of the RA Advisory Panel. A copy of the draft curriculum may be found on the ASRT’s Web site at [http://www.asrt.org](http://www.asrt.org). Comments are being accepted, and those interested are encouraged to take the opportunity to provide feedback to the ASRT.

All RA programs will include clinical preceptorships with radiologists. The agreement between an educational program and a radiologist or radiologists will specify the scope of training to be provided.

In addition, the ARRT will develop a list of clinical competencies that must be demonstrated by students and verified by program directors to establish eligibility for ARRT certification. This list will not limit what a program chooses to cover but will provide a minimum set of competencies that all RAs must meet for certification.

To ensure that all programs are providing quality educational experiences, the ARRT will adopt a set of criteria that educational programs must satisfy as well as a mechanism to ensure that the criteria are satisfied.

There are currently 13 RA educational programs in various stages of development. The program at Loma Linda University will be the first to graduate students, having admitted its first class of students fall 2003. All programs are expected to require the completion of a radiography program and certification in radiography as prerequisites. The 13 programs have been organized into four educational programs to provide data on their duties. Because there are currently no RAs, the normal process will be replaced by a consensus process. The roles already identified by the RA Advisory Panel will serve as a foundation.

Once the role delineation is finalized, the development of an outline of the knowledge necessary to safely and effectively carry out the role will be developed. Test questions will be developed to assess the knowledge. Examination forms will be assembled to reflect appropriate weightings of content. The ARRT’s Advisory Committee will be responsible for reviewing test questions and developing examination forms.

Once the examination forms are developed, a level of performance will be determined. The examination’s pass-fail point reflects the minimum amount of knowledge that must be demonstrated to be deemed eligible for certification. Given the nature of the duties of RAs, a stringent performance standard is anticipated.
Examinations will be administered at secure testing sites through a computer-based testing network, as used for the ARRT’s other certification programs. The arrangements ensure the positive identification of candidates and provide a standardized environment for the assessment.

**SCHEDULE**

The ARRT’s board appointed an RA advisory committee in June 2003. Appointments were made from individuals identified by the ACR, ASRT, and ARRT. Members include radiologists, technologists, educators, and physicists. A member of the ARRT’s board will serve as a liaison to the committee, and ARRT staff members will facilitate the committee’s activities. The committee held its first meeting in October 2003. After an orientation to the process and a review of existing materials, the committee began the process of drafting standards for education, ethics, and examination.

Standards will be sent to the ARRT’s board for review and to the professional community for feedback. Drafts will be posted on the ARRT’s Web site with opportunities for comment.

The certification program is scheduled to be available for use in September 2005. This will coincide with the first graduates of RA educational programs.

**ISSUES**

The ARRT recognizes that there are a number of important issues that need to be addressed for RA certification to be meaningful. Among these are state licensing laws, reimbursement, and acceptance by the professional community.

Approximately two-thirds of states have licensing laws that govern who can perform radiologic technology procedures. Some of the laws restrict technologists from performing one or more of the activities envisioned for RAs. Certification does not override state laws, so efforts will be made to amend state laws or regulations to allow RAs to work in all states. The ACR, ASRT, and ARRT will collaborate on model legislation and will cooperate to see that state laws support the RA role.

The ACR and ASRT have agreed to work collaboratively on reimbursement issues. A united front will be presented to the Centers for Medicare & Medicaid Services by the organizations on such issues as supervision rules involving the RA role as it affects reimbursement.

The certification of RAs will be meaningless if individuals are not able to find employment as RAs. Because RAs will work under the supervision of radiologists, acceptance by the radiologic community is essential. Acceptance hinges on the community’s confidence that RAs have received appropriate education, are held to high ethical standards, and have had their knowledge levels appropriately assessed. The ARRT’s certification program is designed to provide that assurance.

**REFERENCES**