



Sonography

1. Introduction

Candidates for certification and registration are required to meet the Professional Education Requirements specified in the ARRT Rules and Regulations. ARRT's Sonography Didactic and Clinical Competency Requirements are one component of the Professional Education Requirements.

The requirements are periodically updated based upon a [practice analysis](#) which is a systematic process to delineate the job responsibilities typically required of staff sonographers. The result of this process is a [task inventory](#) which is used to develop the clinical competency requirements (see section 4 below) and the content specifications which serve as the foundation for the didactic competency requirements (see section 3 below) and the examination.

2. Documentation of Compliance

To document that the Didactic and Clinical Competency Requirements have been satisfied by a candidate, the program director (and authorized faculty member if required) must sign the ENDORSEMENT SECTION of the Application for Certification and Registration included in the Certification and Registration Handbook.

Candidates who complete their educational program during 2013 or 2014 may use either the 2006 Didactic and Clinical Competency Requirements or the 2013 requirements. Candidates who graduate after December 31, 2014 must use the 2013 requirements.

3. Didactic Competency Requirements

The purpose of the didactic competency requirements is to verify that individuals had the opportunity to develop fundamental knowledge, integrate theory into practice and hone affective and critical thinking skills required to demonstrate professional competency. Candidates must successfully complete coursework addressing the topics listed in the [ARRT Content Specifications](#) for the Sonography Examination. These topics would typically be covered in a nationally-recognized curricula corresponding to a concentration in general sonography. Educational programs accredited by a mechanism acceptable to ARRT generally offer education and experience beyond the minimum requirements specified here.

4. Clinical Competency Requirements

The purpose of the clinical competency requirements is to verify that individuals certified and registered by the ARRT have demonstrated competency performing the clinical activities fundamental to a particular discipline. Competent performance of these fundamental activities, in conjunction with mastery of the cognitive knowledge and skills covered by the sonography examination, provides the basis for the acquisition of the full range of procedures typically required in a variety of settings. Demonstration of clinical competence means that the candidate has performed the procedure independently, consistently, and effectively during the course of his or her formal education. The following pages identify the specific procedures for the clinical competency requirements. Candidates may wish to use these pages, or their equivalent, to record completion of the requirements. The pages do NOT need to be sent to the ARRT.



4.1 General Performance Considerations

4.1.1 Patient Diversity

Demonstration of competence should include variations in patient characteristics such as age, gender, and medical condition.

4.1.2 Elements of Competence

Demonstration of clinical competence requires that the program director or the program director's designee has observed the candidate performing the procedure independently, consistently, and effectively during the course of the candidate's formal educational program.

4.2 Sonography-Specific Requirements

Candidates must complete the mandatory and elective requirements identified demonstrating appropriate:

- patient preparation, including evaluation of requisition or medical record, preparation of exam room, identification of patient, infection control procedures (i.e., Standard Precautions), patient assessment, and instruction concerning the procedure;
- exam protocol, including patient positioning, sonographic technique, parameter selection, image display, image annotation and labeling, archiving, and documentation of procedure; and
- image evaluation, including image quality, optimal demonstration of anatomic region and pathology, and exam completeness.

The candidate's clinical education should include variation in patient characteristics, provide ample opportunity for demonstration of both normal and variant anatomy, as well as important pathologies and medical conditions.

A variety of instructional methods may be useful for teaching the clinical skills identified in this document. For purposes of satisfying these requirements, candidates must be evaluated while scanning actual patients. Simulation is not acceptable for final competence assessment of imaging procedures.

As part of the educational program, candidates must demonstrate competence in the clinical activities identified below:

- Seven mandatory general patient care procedures;
- Four mandatory scanning techniques;
- 22 mandatory imaging procedures; and
- Five elective imaging procedures selected from a list of 16 procedures.

These clinical activities are listed in more detail in the following sections.



4.2.1 Mandatory Patient Care Requirements and Scanning Techniques

Candidates must demonstrate competence in all seven patient care procedures and four scanning techniques listed below. The activities should be performed on patients whenever possible, but simulation is acceptable if state or institutional regulations prohibit candidates from performing the procedures on patients.

	Date Completed	Competence Verified By
Mandatory Patient Care Procedures		
Vital Signs (Blood Pressure, Pulse, Respiration)		
CPR		
O ₂ Monitoring		
Standard Precautions		
Sterile Technique		
Monitoring Level of Consciousness and Respiration		
Verification of Informed Consent		
Mandatory Scanning Techniques		
Color Doppler		
Power Doppler		
Spectral Doppler		
M-Mode		



4.2.1 Mandatory Sonographic Procedures

Candidates must demonstrate competence in all 22 mandatory imaging procedures listed below.

Mandatory Sonographic Procedures	Date Completed	Competence Verified By
Abdomen		
Liver		
Gallbladder/Biliary Tract/CBD		
Pancreas		
Spleen		
Kidneys		
Bladder		
Aorta		
IVC		
Main Portal Vein		
Vasculature (e.g., Hepatic, Renal, Aortic Branches)		
Superficial Structures		
Scrotum and Testis		
Thyroid		
Gynecology (Transabdominal)		
Uterus		
Adnexa (Including Ovaries)		
Gynecology (Transvaginal)		
Uterus		
Adnexa (Including Ovaries)		
Obstetrics		
First Trimester		
Second Trimester		
Third Trimester		
Interventional Procedures		
Biopsy		
Aspiration		
Drainage Procedures		



4.2.2 Elective Sonographic Procedures

Candidates must demonstrate competence in 5 of the 16 procedures listed below.

Elective Sonographic Procedures	Date Completed	Competence Verified By
General		
Breast		
Musculoskeletal		
Adrenals		
Superficial Masses		
Appendix		
Abdominal Wall		
Prostate		
Fetal Biophysical Profile		
Vascular		
Post Catheterization Complication		
Venous Extremity		
Carotid		
Pediatric		
Head		
Spine		
Hips		
Pyloric Stenosis		
Intussusception		