

Diagnostic Medical Sonographer

Professional Activities

Diagnostic medical sonographers use special equipment to direct high frequency sound waves into areas of the patient's body. Sonographers operate the equipment, which collects reflected echoes and forms an image that may be videotaped, transmitted, or photographed for interpretation and diagnosis by a physician.

Sonographers begin by explaining the procedure to the patient and recording any medical history that may be relevant to the condition being viewed. They then select appropriate equipment settings and direct the patient to move into positions that will provide the best view. To perform the exam, sonographers use a transducer, which transmits sound waves in a cone-shaped or rectangle-shaped beam. Although techniques vary by the area being examined, sonographers usually spread a special gel on the skin to aid the transmission of sound waves.

Viewing the screen during the scan, sonographers look for subtle visual cues that contrast healthy areas with unhealthy ones. They decide whether the images are satisfactory for diagnostic purposes and select which ones to store and show to the physician. Sonographers take measurements, calculate values, and analyze the results in preliminary findings for the physicians.

In addition to working directly with patients, diagnostic medical sonographers keep patient records and adjust and maintain equipment. They also may prepare work schedules, evaluate equipment purchases, or manage a sonography or diagnostic imaging department.

Diagnostic medical sonographers may specialize in obstetric and gynecologic sonography (images of the female reproductive system), abdominal sonography (images of the liver, kidneys, gallbladder, spleen, and pancreas), neurosonography (images of the brain and other parts of the nervous system), or breast sonography. In addition, sonographers may specialize in vascular sonography or cardiac sonography.

Most full-time sonographers work about 40 hours a week; they may have evening weekend hours and times when they are on call and must be ready to report to work on short notice.

Sonographers typically work in healthcare facilities that are clean and well lit. Some travel to patients in large vans equipped with sophisticated diagnostic equipment. Sonographers are on their feet for long periods and may have to lift or turn disabled patients. They work at diagnostic imaging machines but may also do some procedures at patients' bedsides.

Educational Requirements

Diagnostic medical sonography is an occupation to which there are multiple paths of entry. Formal education in sonography, training, or a combination of these are accepted by employers. Employers do prefer sonographers who have received education from an accredited program or completed training in an accredited practice, and who are registered.

Colleges and universities offer formal training in both 2-year and 4-year programs, resulting in either an associate or a bachelor's degree. Two-year programs are the most prevalent. Coursework includes classes in anatomy, physiology, instrumentation, basic physics, patient care, and medical ethics. In 2008, the Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredited over 150 training programs. Accredited programs are offered by colleges and universities. Some hospital programs are accredited as well.

A few 1-year programs that typically result in a vocational certificate also are accepted as proper education by employers. These programs are useful usually only for workers already employed in a healthcare occupation who seek to increase their marketability by training in sonography.

No States require licensure in diagnostic medical sonography. However, sonographers may become credentialed by one of the professional certifying bodies. Most employers prefer to hire registered sonographers because registration provides an objective measure of an individual's professional standing. The American Registry for Diagnostic Medical Sonography (ARDMS) certifies each person who passes the exam as a Registered Diagnostic Medical Sonographer (RDMS). This credential can be obtained for several different specialty areas like the abdomen, breast, or nervous system. The ARDMS also credentials cardiac and vascular sonographers.

Academic Programs

[Carl Sandburg College](#)
[College of DuPage](#)
[Danville Area Community College](#)
[Harper College](#)
[John A Logan College](#)

[Kaskaskia College](#)
[Lewis University](#)
[Rush University](#)
[Southern Illinois University](#)
[Triton College](#)

Employment/Salary Outlook

Employment of diagnostic medical sonographers is expected to increase by about 18 percent through 2018—faster than the average for all occupations. As the population continues to age, there will be an increasing demand for diagnostic imaging. Additional job growth is expected as healthcare providers increasingly utilize ultrasound imaging as a safer and more cost-effective alternative to radiological procedures. Ultrasound imaging technology is expected to evolve rapidly and spawn many new sonography procedures, enabling sonographers to scan and image areas of the body where ultrasound has not traditionally been used.

State and National Wages

Location	Pay Period	2009				
		10%	25%	Median	75%	90%
United States	Hourly	\$21.15	\$25.53	\$30.30	\$35.77	\$41.32
	Yearly	\$44,000	\$53,100	\$63,000	\$74,400	\$85,900
Illinois	Hourly	\$23.38	\$27.79	\$33.25	\$39.62	\$45.96
	Yearly	\$48,600	\$57,800	\$69,200	\$82,400	\$95,600

State and National Trends

United States	Employment		Percent Change	Job Openings ¹
	2008	2018		
Diagnostic medical sonographers	50,300	59,500	+18%	1,650
Illinois	Employment		Percent Change	Job Openings ¹
	2008	2018		
Diagnostic medical sonographers	1,900	2,120	+12%	50

¹Job Openings refers to the average annual job openings due to growth and net replacement.

Professional Information

Society of Diagnostic Medical Sonography
 2745 Dallas Pkwy Ste 350
 Plano, TX 75093-8730
 (214) 473-8057
 (800) 229-9506
<http://www.sdms.org/>

American Registry of Diagnostic Medical Sonographers
 51 Monroe Street, Plaza East One
 Rockville, Maryland 20850-2400
 Tel: 301.738.8401
<http://www.ardms.org/>

References

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2010-11 Edition, Diagnostic Medical Sonographers, on the Internet at <http://www.bls.gov/oco/ocos273.htm>

O*NET OnLine, on the Internet at <http://online.onetcenter.org/link/summary/29-2032.00>

Date Last Modified: May 10, 2011