

Scope of Practice and Clinical Standards for the Diagnostic Medical Sonographer

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SCOPE OF PRACTICE REVISION PROCESS

In October 2022, representatives of 20 organizations came together to begin the process of revising the existing *Scope of Practice and Clinical Standards for the Diagnostic Medical Sonographer*. Thus began a process that engaged the participating organizations in an unrestricted dialogue about needed changes. The collaborative process and exchange of ideas has led to this document, which is reflective of the current community standard of care. The current participants recommend a similar collaborative process for future revisions that may be required as changes in ultrasound technologies and healthcare occur.

ENDORISING/SUPPORTING ORGANIZATIONS

The following organizations participated in the development of this document. Those organizations that have formally endorsed the document are identified with the “†” symbol. Supporting organizations are identified with the “*” symbol.

- AHRA: The Association for Medical Imaging Management (AHRA) †
- American College of Radiology (ACR) †
- American Institute of Ultrasound in Medicine (AIUM) *
- American Registry for Diagnostic Medical Sonography (ARDMS)/Inteleos *
- American Registry of Radiologic Technologists (ARRT) *
- American Society of Echocardiography (ASE) †
- American Society of Radiologic Technologists (ASRT) *
- Cardiovascular Credentialing International (CCI) *
- Committee on Accreditation of Advanced Cardiovascular Sonography (CoA-ACS) †
- International Contrast Ultrasound Society (ICUS) †
- Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) †
- Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS) †
- Society for Vascular Medicine (SVM) †
- Society for Vascular Ultrasound (SVU) †
- Society of Diagnostic Medical Sonography (SDMS) †
- Society of Radiologists in Ultrasound (SRU) †

Note: *Some organizations have internal policies that do not permit endorsement of external documents. “Supporting organization” denotes a more limited level of review and approval than endorsement and means the organization considers the clinical document to be of educational value, although it may not agree with every recommendation or statement in the document.*

OTHER PARTICIPATING ORGANIZATIONS

The following organizations participated in the development of this document.

- American Vein and Lymphatic Society (AVLS)
- Intersocietal Accreditation Commission (IAC)
- Medical Imaging Technology Alliance (MITA)
- Perinatal Quality Foundation (PQF)

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LIMITATION AND SCOPE

This document applies to diagnostic medical sonographers in the United States. Federal and state laws and rules/regulations, accreditation standards, and written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed may supersede these standards. The diagnostic medical sonographer, within the boundaries of all applicable legal requirements and restrictions, exercises individual thought, judgment, and discretion in the performance of a diagnostic medical sonographic examination or procedure considering the facts of the individual case.

This document is intended to set forth the standards in major areas of the diagnostic medical sonographer's responsibilities. It does not cover all areas or topics that may present themselves in actual practice. In addition, technological changes or changes in diagnostic medical sonographer practice may require modification of the scope of practice or clinical standards.

The definition of many of the terms and phrases used in this document is provided in the next section. A supervising physician or facility can use the list of considerations provided in Appendix A when evaluating a new diagnostic sonographic examination, procedure, or task.

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TERMINOLOGY AND DEFINITIONS

NOTE: The terms examination, procedure, study, and test are sometimes used interchangeably by the medical community, insurance companies, and government agencies. However, for the purposes of this document, the terminology and definitions provided below will apply.

For purposes of this document, the following terminology and definitions are used:

Advanced Diagnostic Medical Sonographer (Advanced Sonographer): A sonographer who performs advanced or expanded sonography or related examinations, procedures, and tasks, or who may assist a physician or other legally authorized healthcare provider with interventional, invasive, or therapeutic procedures, under the supervision of a physician and in accordance with the written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed.

Adverse/Sentinel Event: An adverse/sentinel event is an unexpected occurrence involving actual or risk of death or serious physical or psychological injury.

ALARA: An acronym for *As Low As Reasonably Achievable*, the fundamental principle for the safe use of diagnostic medical ultrasound is to use the lowest output power, shortest scan time, and shortest dwell time (where appropriate) consistent with acquiring the required diagnostic images and information.

Certification: Designates that a person has demonstrated, through successful completion of a specialty certification examination, the requisite knowledge, skills, and competencies and met other requirements established by an accredited sonography certification/credentialing organization. Certification also includes maintenance of certification or renewal requirements. Also known as a sonography “registration.”

Certification/Credentialing Organization: A national or international certification/ credentialing organization that specializes in the certification and registration of diagnostic medical sonographers and is accredited by the National Commission for Certifying Agencies (NCCA) or American National Standards Institute – International Organization for Standardization (ANSI – ISO). The certification/credentialing organization awards a sonography credential upon successful completion of competency-based certification examination(s) and other requirements. Also known as a sonography “registry.” Examples include the American Registry of Radiologic Technologists (ARRT), American Registry for Diagnostic Medical Sonography (ARDMS), and Cardiovascular Credentialing International (CCI).

Continuing Medical Education (CME): Ongoing education and training undertaken to maintain and enhance the sonographer’s knowledge and skills. CME may be required by employers, certification/ credentialing organizations, accreditation organizations, state agencies, and other relevant entities.

Credential: The recognition awarded to a person who has met the initial (and continuing) knowledge, skills, and competencies requirements of a sonography certification/credentialing organization.

Diagnostic Medical Sonographer (Sonographer): A person who provides diagnostic medical sonography examinations and related procedures. The images, findings, or results obtained by the sonographer are provided to an interpreting physician and may aid physicians or legally authorized healthcare providers in the evaluation, diagnosis, or treatment of disease or abnormality.

Education: The process undertaken to gain knowledge of facts, principles, and concepts. Education encourages problem solving, critical thinking, and application of the facts, principles, and concepts learned. A sonographer’s educational preparation includes their initial and continuing medical education, as well as professional development.

Examination: A sonographic investigation performed to obtain diagnostic images and other information that aids physicians or legally authorized healthcare providers in the evaluation, diagnosis, or treatment of disease or abnormality.

Facility: The employer of the sonographer including, but not limited to a hospital, clinic, physician’s office, mobile service.

TERMINOLOGY AND DEFINITIONS (*continued*)

Interpreting Physician: The physician who evaluates the sonographer's images, findings, or results of the diagnostic examination or procedure. The interpreting physician provides the final interpretation, diagnosis, differential diagnosis, and/or recommendation(s) to the referring healthcare provider. In some clinical settings, the supervising and interpreting physician may be the same person.

Policy: A statement of intent to follow a particular course of action.

Procedure: A specific action or methodology performed to obtain diagnostic images and information that aids physicians or legally authorized healthcare providers in the evaluation, diagnosis, or treatment of disease or abnormality.

Professional Development: Ongoing process of acquiring new knowledge, skills, and abilities to enhance a sonographer's career or prepare for career advancement opportunities. This may include both formal education (e.g., earning advanced degrees or certifications) or informal learning (e.g., attending seminars and conferences).

Protocol: A documented series of steps used to acquire needed diagnostic images and information when performing an examination or procedure.

Referring Healthcare Provider: A licensed physician or other legally authorized healthcare provider, who orders a diagnostic sonographic examination or procedure or refers the patient to a specialized facility for a diagnostic sonographic examination or procedure. In some clinical settings, the referring, supervising, and interpreting physician may be the same person.

Sonographer's Report: The sonographer's analysis of the images, findings, or results from a diagnostic sonographic examination or procedure. In accordance with the supervising physician or facility policies, the sonographer's report may include descriptive or diagnostic terminology. However, the sonographer's report is intended for the interpreting physician, not the patient. The sonographer's report is not a legal diagnosis. May also be known as a sonographer's technical report, worksheet, or notes.

Specialization: A medical specialty area with a corresponding sonography certification from a sonographer certification/credentialing organization.

Supervising Physician: A physician who provides overall medical direction of the sonographer but whose physical presence may not necessarily be required during the performance of a diagnostic sonographic examination or procedure. The supervising physician is available to review examinations and procedures and to offer direction and feedback. In some clinical settings, the referring, supervising, and interpreting physician may be the same person.

Task: Discrete action or step that is part of a larger sonographic examination or procedure (e.g., machine setting adjustment, transducer placement, patient positioning, disinfection). A task is typically more granular or focused than either an examination or procedure.

Training: Guided instruction, both didactic and clinical, necessary to properly perform an examination or procedure in accordance with accepted practice standards. While closely related to education, training is undertaken to gain a specific skill.

Work-Related Musculoskeletal Disorder (WRMSD): The conditions or risk for conditions that are caused or aggravated by cognitive and physical workplace activities, which can affect the mind and body. Unlike acute injuries that occur in the workplace, such as slips, trips, and falls, a WRMSD develops gradually over time from repeated exposure to a variety of risk factors, which may be painful during work or at rest. Also referred to as "work-related musculoskeletal strain injuries" and "cumulative trauma disorders."

SCOPE OF PRACTICE AND CLINICAL STANDARDS FOR THE DIAGNOSTIC MEDICAL SONOGRAPHER

STATEMENT OF PURPOSE

The purpose of this document is to define the scope of practice and clinical standards for the diagnostic medical sonographer (“sonographer”) and describe their role as a member of the healthcare team. Above all else, the sonographer should act in the best interest of the patient.

The sonographer’s scope of practice is defined by four components: professional, jurisdictional, institutional, and personal.

1. The **professional** component is grounded in the diagnostic medical sonography (“sonography”) profession’s unique body of knowledge, supported by educational preparation, based on a body of evidence, and linked to existing or emerging medical practice frameworks (including specialty clinical practice or accreditation standards, guidelines, or recommendations).
2. The **jurisdictional** (i.e., legal) component is established by any applicable federal or state laws and regulations/rules (e.g., medical imaging licensure, medical practice acts, privacy laws, abuse reporting laws, and legal opinions).
3. The **facility** component defines the sonographer’s operational functions and responsibilities and is approved by the supervising physician or facility’s credentialing process (e.g., through written job descriptions and written supervising physician or facility policies, procedures, and protocols).
4. The **personal** component consists of the examinations, procedures, and associated tasks for which the sonographer is educated, trained, competent, and certified to perform.

DEFINITION OF THE PROFESSION

Sonography is a multi-specialty profession comprised of abdominal sonography, breast sonography, cardiac (i.e., adult, fetal, pediatric) sonography, musculoskeletal sonography, obstetrics/gynecology sonography, pediatric sonography, venous sonography, vascular technology/sonography, and other emerging specialties and clinical areas. These diverse specialties and clinical areas all use ultrasound as the primary imaging technology.

The sonographer performs diagnostic sonographic examinations, procedures, and associated tasks. The sonographic images and other information obtained by the sonographer is provided to the interpreting or supervising physician. In addition, the sonographer may assist a physician or other legally authorized healthcare provider who is performing interventional, invasive, or therapeutic procedures. The sonographer does not practice independently, but rather functions as a delegated agent and under the supervision of a physician. The sonographer functions in accordance with the written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed. Specialty clinical practice or accreditation standards, guidelines, or recommendations may also impact the sonographer’s performance of an examination, procedure, or task.

A fundamental approach to the safe use of ultrasound is to apply elements of the *As Low As Reasonably Achievable* (“ALARA”) *Principle* including lowest output power, the shortest scan time, and the shortest dwell time (where appropriate), consistent with acquiring the required diagnostic images and related information. The sonographer uses proper patient positioning, tools, devices, equipment adjustment, and ergonomically correct scanning techniques to promote patient comfort, prevent compromised acquisition of examination or procedure images, findings, or results, and prevent musculoskeletal injury to the sonographer.

Sonographers must be committed to increasing knowledge and technical competence (e.g., through continuing medical education and staying abreast of emerging trends, technologies, and advancements in

the profession). Sonographers use independent, professional, and ethical judgment and critical thinking to safely perform diagnostic sonographic examinations, procedures, and associated tasks. Despite the commonality of ultrasound technology across the field of sonography, the bodies of knowledge, technical skills, and competencies of sonographers vary by sonography specialty areas. The sonographer should demonstrate competence through appropriate education, training, and experience in all diagnostic sonographic examinations, procedures, and associated tasks performed.

Demonstration and maintenance of competency through certification by a sonography certification/credentialing organization that is accredited by the National Commission of Certifying Agencies (NCCA) or American National Standards Institute – International Organization for Standardization (ANSI – ISO) is the standard of practice in sonography, and maintenance of certification in all areas of clinical practice is endorsed. States, employers, and accrediting organizations should require maintenance of sonographer certification, if available, in all areas of clinical practice.

EVOLVING ADVANCED ROLES

Under the supervision of a physician and in accordance with the written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, some sonographers may be authorized to perform advanced or expanded sonography or related examinations, procedures, and tasks, or to assist physicians or other legally authorized healthcare providers with performance of interventional, invasive, or therapeutic procedures (see Appendices A and B). Advanced sonographer job titles (e.g., advanced sonographer, advanced cardiac sonographer, ultrasound practitioner) and written job descriptions may vary based on the needs of the supervising physician or facility and their education, training, competence, experience, and available advanced sonographer certifications/credentials. In this document, they are referred to as advanced diagnostic medical sonographers (or advanced sonographers).

Advanced sonographers have a higher level of education, training, competence, and experience and are qualified to perform more complex and specialized examinations and procedures. They have a deeper understanding of anatomy, physiology, and medical conditions, and may be responsible for accurately analyzing their own and other's sonographic findings. Other roles assigned to advanced sonographers may include but not be limited to improving lab quality and efficiency through continuous quality improvement, mentorship, educational, professional development, and sonographic-related research programs. Formal advanced education and training or advanced-level sonography certification/credentialing may be required (e.g., Advanced Cardiac Sonographer (ACS) from Cardiovascular Credentialing International).

NOTE: Temporary or short-term situational exceptions to the sonographer certification standard of practice may be necessary (in accordance with applicable federal and state laws and facility policy). For example:

- Sonography students enrolled in an accredited sonography educational program who are providing clinical services to patients under the appropriate supervision of a qualified sonographer or other qualified healthcare provider.
- Sonographers who are cross-training in an additional sonography specialty area under the supervision of an appropriately certified sonographer or other qualified healthcare provider.
- Sonographers or sonography students who are providing assessment during an emergency (e.g., disaster) where an appropriately certified sonographer is not available in a timely manner.

DIAGNOSTIC MEDICAL SONOGRAPHER CLINICAL STANDARDS

Standards are designed to reflect behavior and performance levels expected in clinical practice for the sonographer. These clinical standards set forth the principles that are common to all the specialty areas and clinical settings within the diagnostic medical sonography profession. Individual specialties or clinical settings may extend or refine, but should not limit, these general principles according to their specific practice requirements.

SECTION 1

STANDARD – PATIENT INFORMATION ASSESSMENT AND EVALUATION

- 1.1 Information regarding the patient's past and present health status is essential in providing relevant diagnostic information. Therefore, pertinent information related to the diagnostic sonographic examination or procedure should be collected and evaluated to determine its relevance to the examination. In compliance with privacy and confidentiality standards and in accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
 - 1.1.1 Verifies patient identification using multiple indicators (e.g., name and date of birth) and that the ordered examination or procedure correlates with the patient's clinical history and presentation.
 - 1.1.2 Consults the facility's policies, procedures, protocols, supervising physician, or referring healthcare provider on how to proceed if the ordered examination or procedure does not correlate with the patient's clinical history and presentation.
 - 1.1.3 Interviews the patient, or their representative, and/or reviews the medical record, including prior correlative imaging studies, to gather relevant information regarding the patient's medical history and current presenting indications for the study.
 - 1.1.4 Evaluates and documents any contraindications, insufficient patient preparation, and the patient's inability or unwillingness to tolerate the examination or procedure.
 - 1.1.5 Verifies the patient, or their representative, understands and has provided consent for the diagnostic sonographic examination or procedure to be performed.

STANDARD – PATIENT COMMUNICATION AND EDUCATION

- 1.2 Effective communication and education are necessary to establish a positive relationship with the patient or their representative, and to elicit patient cooperation and understanding of expectations. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
 - 1.2.1 Communicates explanations and instructions to the patient, or their representative, in a manner appropriate to the individual's ability to understand.
 - 1.2.2 Responds to questions of concerns from the patient, or their representative.
 - 1.2.3 Communicates authorized information to other healthcare providers or the patient (or their representative), as directed.
 - 1.2.4 Refers specific diagnostic, treatment, or prognosis questions to the appropriate physician or healthcare provider.

STANDARD – ANALYSIS AND DETERMINATION OF PROTOCOL FOR THE DIAGNOSTIC EXAMINATION OR PROCEDURE

- 1.3** Determination of the most appropriate protocol will optimize patient safety and comfort, diagnostic quality, and efficient use of resources, while achieving the objective of the examination or procedure. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
- 1.3.1 Integrates medical history, previous studies, and current symptoms in determining the appropriate diagnostic protocol and customizing the examination or procedure to the needs of the patient.
 - 1.3.2 Uses professional judgment to adapt the protocol or consults appropriate healthcare providers, when necessary, to optimize examination or procedure images, findings, or results.
 - 1.3.3 Follows facility protocol or consults with the supervising physician to determine if an intravenous ultrasound contrast agent or other pharmacologic agent may enhance image quality or obtain additional diagnostic information.
 - 1.3.4 With appropriate education, training, demonstration of competence, and supervision, performs venipuncture, intravenous line insertion, and administration of intravenous fluid, ultrasound contrast agent, or other pharmacologic agent to enhance image quality or obtain additional diagnostic information.
 - 1.3.5 With appropriate education, training, demonstration of competence, and supervision, administer other medications related to the examination or procedure via enteral or parenteral routes, as prescribed by a physician or other legally authorized healthcare provider.

STANDARD – IMPLEMENTATION OF THE PROTOCOL

- 1.4** Quality patient care is provided through the safe and accurate implementation of a deliberate protocol. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
- 1.4.1 Performs the examination or procedure.
 - 1.4.2 Adapts the protocol according to the patient's disease process or condition, any contraindications, insufficient patient preparation, or other factors affecting completion of the examination or procedure.
 - 1.4.3 Adapts the protocol according to any physical environment where the examination or procedure must be performed (e.g., operating room, sonography laboratory, patient's bedside, emergency room) to ensure patient safety and comfort and minimize risk of sonographer injury, including a work-related musculoskeletal disorder (WRMSD).
 - 1.4.4 Adapts the protocol according to images obtained or changes in the patient's clinical status during the examination or procedure.
 - 1.4.5 Monitors the patient's clinical status and performs basic patient care tasks related to the examination or procedure, as needed.
 - 1.4.6 Activates emergency protocol and administers first aid or basic life support, if needed.
 - 1.4.7 Recognizes sonographic characteristics of images, findings, or results; adapts protocol as appropriate to further assess images, findings, or results; adjusts scanning technique to optimize image quality and diagnostic information.
 - 1.4.8 Performs examination or procedure measurements and calculations, if applicable.
 - 1.4.9 Analyzes sonographic images, findings, or results throughout the course of the examination or procedure so that optimal examination or procedure is completed, and sufficient information is provided in the sonographer's report to the interpreting physician.

STANDARD – EVALUATION OF THE DIAGNOSTIC SONOGRAPHIC EXAMINATION OR PROCEDURE IMAGES, FINDINGS, OR RESULTS

- 1.5** Careful evaluation of examination or procedure images, findings, or results in the context of the protocol is important to determine whether the goals have been met. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
- 1.5.1 Determines that the examination, as performed, complies with the applicable protocol.
 - 1.5.2 Identifies and documents any limitations to the examination or procedure (e.g., equipment failure, lack of patient cooperation or preparation).
 - 1.5.3 Initiates additional techniques or procedures (e.g., administering intravenous ultrasound enhancing or other pharmacologic agents) or obtains additional images, when indicated.
 - 1.5.4 Notifies appropriate healthcare provider(s) when immediate medical attention may be necessary, based on the examination or procedure images, findings, or results, or the patient's condition.

STANDARD – DOCUMENTATION

- 1.6** Clear and precise documentation is necessary for continuity of care, accuracy of care, and quality assurance. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
- 1.6.1 Provides timely, accurate, concise, and complete images and documentation to the interpreting physician.
 - 1.6.2 Documents adaptations of the facility's protocol including, but not limited to, any contraindications, insufficient patient preparation or inability or unwillingness to complete the examination or procedure, or any physical circumstances under which the examination or procedure was performed.
 - 1.6.3 Provides a written or electronic sonographer's report of the examination or procedure images, findings, or results to the interpreting physician, and if needed (e.g., due to critical examination or procedure images, findings, results, or the patient's condition), a verbal report.

SECTION 2

STANDARD – IMPLEMENT SAFETY AND QUALITY IMPROVEMENT PROGRAMS

- 2.1** Participation in safety and quality improvement programs is imperative. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
- 2.1.1 Maintains a safe environment for patients and staff.
 - 2.1.2 Maintains a safe environment for the sonographer to avoid injuries, including WRMSDs.
 - 2.1.3 Directs, implements, or performs quality control procedures to determine that equipment operates at optimal levels and to promote patient safety.
 - 2.1.4 Participates in quality improvement programs that evaluate technical quality of images, completeness of examinations, and adherence to protocols or accreditation standards.

STANDARD – QUALITY OF CARE

- 2.2** All patients expect and deserve optimal care. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
 - 2.2.1 Obtains the images and information needed by the interpreting physician.
 - 2.2.2 Reports suboptimal performance of equipment, examination or procedure conditions, patient positioning or cooperation, or adverse/sentinel events.

STANDARD – SONOGRAPHER HEALTH AND WELL-BEING

- 2.3** Sonographer physical and mental health and well-being is essential to ensure ability and availability to perform diagnostic sonographic examinations, procedures, and associated tasks. In accordance with written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed, the sonographer:
 - 2.3.1 Directs, implements, or participates in programs that seek to improve the health and well-being of sonographers, including but not limited to the reduction of WRMSDs.
 - 2.3.2 Recognizes and reports signs and symptoms of WRMSDs and changes in health status or well-being.

SECTION 3

STANDARD – SELF-ASSESSMENT

- 3.1** Self-assessment is an essential component in professional growth and development. Self-assessment involves evaluation of personal performance, knowledge, and skills. The sonographer:
 - 3.1.1 Recognizes strengths and uses them to benefit patients, coworkers, and the profession.
 - 3.1.2 Recognizes weaknesses and limitations and performs examinations and procedures only after demonstrating competence through appropriate education, training, experience, and certification in relevant areas of clinical practice.
 - 3.1.3 Recognizes the need to stay informed about new developments, technologies, and trends in relevant areas of clinical practice, which may require additional training or education.

STANDARD – EDUCATION

- 3.2** Advancements in medical science and technology occur very rapidly, requiring an ongoing commitment to professional education. The sonographer:
 - 3.2.1 Obtains and maintains appropriate professional certification/credential and state license, if required, in areas of clinical practice.
 - 3.2.2 Takes advantage of opportunities for educational and professional development and growth beyond required continuing medical education.

STANDARD – COLLABORATION

- 3.3** Quality patient care is provided when all members of the healthcare team communicate and collaborate efficiently. The sonographer:
 - 3.3.1 Promotes a positive and collaborative atmosphere with members of the healthcare team.

- 3.3.2 Supports coworkers and colleagues in adopting healthy work practices and creating a supportive work environment.
- 3.3.3 Communicates effectively with members of the healthcare team regarding patient welfare while maintaining patient privacy in written, digital, and verbal communication.
- 3.3.4 Shares knowledge and expertise with colleagues, students, and members of the healthcare team.

SECTION 4

STANDARD – ETHICS

- 4.1 All decisions made and actions taken on behalf of the patient adhere to ethical and professional standards. The sonographer:
 - 4.1.1 Adheres to accepted professional ethical standards and maintains professional accountability.
 - 4.1.2 Is accountable for their own professional judgments, decisions, and actions.
 - 4.1.3 Provides patient care with equal kindness, compassion, dignity, and respect for all.
 - 4.1.4 Respects and promotes patient rights and acts as a patient advocate.
 - 4.1.5 Does not perform sonographic examination or procedures without a medical order by an authorized healthcare provider, except as authorized in an educational (e.g., sonography educational program, in-service training, and continuing medical education activity) or research setting.
 - 4.1.6 Educates patients and other healthcare providers of the potential exposure risks associated with nonmedical entrepreneurial or entertainment 2D/3D/4D sonographic procedures.
 - 4.1.7 Does not perform examinations or procedures for which they are not appropriately educated, trained, experienced, competent, and as applicable, certified to perform.
 - 4.1.8 Complies with federal and state laws and rules/regulations, accreditation standards, and written supervising physician or facility policies, procedures, protocols, or other requirements of the jurisdiction where performed.
 - 4.1.9 Adheres to this scope of practice and other applicable related professional documents.

APPENDIX A. EVALUATION OF PROPOSED EXAMINATION, PROCEDURE, OR TASK

When a supervising physician or facility proposes that a sonographer perform a new sonography-related examination, procedure, or task, it is critical that everyone involved understand the request and any implications. Failure to carefully consider the parameters and consequences of undertaking a new examination, procedure, or task could impact patient safety and create legal liabilities for the sonographer, supervising physician, interpreting physician, and the facility. Considerations may include, but are not limited to:

Appropriateness

- Does the sonographer's education, training, and experience support a sonographer being the most appropriate person to perform the proposed examination, procedure, or task?
- Is adequate time available for a sonographer to complete the proposed examination, procedure, or task?
- Will the proposed examination, procedure, or task negatively impact the patient's experience or the examination or procedure workflow, images, findings, or results?
- Could the proposed examination, procedure, or task increase the risk of an ergonomic injury to a sonographer?
- Are there any specialty clinical practice or accreditation standards, guidelines, or other recommendations regarding the proposed examination, procedure, or task to be performed by a sonographer?

Patient Safety

- Can the proposed examination, procedure, or task be performed competently and safely by a sonographer?

Research

- Does published peer-reviewed research support the efficacy of the proposed examination, procedure, or task and/or its performance by a sonographer?

Physician Supervision

- Has the proposed examination, procedure, or task been reviewed and approved by the supervising physician or the facility's credentialing body (i.e., medical chain of command)?
- Is the proposed level of physician supervision appropriate and comply with federal, state, accreditation, and other requirements or standards?

Policies and Procedures

- Has the proposed examination, procedure, or task been incorporated into the supervising physician's or facility's written policies and procedures, protocols, and job descriptions, and any applicable written approval(s) been obtained?

Education, Training, and Competence

- Has the proposed examination, procedure, or task been incorporated into a formal education and training program (including continuing medical education) approved by the supervising physician or the facility's credentialing body (i.e., medical chain of command)?
- Has each sonographer's successful completion of the education, training, and demonstration of competence specific to the proposed examination, procedure, or task been documented in writing?
- How will ongoing education, training, and competence be demonstrated and documented?

APPENDIX A. *(continued)*

Accreditation or Insurer Standards

- Have applicable accreditation or insurer standards been consulted/reviewed to ensure the delegation of the proposed examination, procedure, or task to a sonographer complies with accreditation or insurer standards?

Quality Improvement/Assurance

- Has the proposed examination, procedure, or task been incorporated into a new or existing quality improvement program to ensure that it is being performed competently and safely by a sonographer?

Medical Oversight

- If applicable, has the state's medical licensing board been consulted to ensure compliance with the state's statutes, regulations, or written opinions regarding the proposed delegation of the examination, procedure, or task (or similar examination, procedure, or task) to a sonographer been reviewed?

Liability and Risk Management

- Has the supervising physician or facility's risk management (or other applicable department) reviewed the proposed delegation of the examination, procedure, or task to a sonographer to ensure it complies with applicable medical malpractice or business insurance policies?

Legal Review

- Has the supervising physician or facility consulted an attorney licensed to practice in the state to ensure the proposed delegation of the examination, procedure, or task to a sonographer complies with all applicable legal requirements?

APPENDIX B. SONOGRAPHER SCOPE OF PRACTICE RESOURCES

Sonography Certification/Credentialing Organizations

- American Registry for Diagnostic Medical Sonography (ARDMS)
<https://www.ardms.org/>
- American Registry of Radiologic Technologists (ARRT)
<https://www.arrt.org/>
- Cardiovascular Credentialing International (CCI)
<https://cci-online.org/>

Sonography Educational Program Accreditation

- Commission on Accreditation of Allied Health Education Programs (CAAHEP)
<https://www.caahep.org/>
 - Committee on Accreditation of Advanced Cardiovascular Sonography (CoA-ACS)
<https://caahep-public-site-5be3d9.webflow.io/committees-on-accreditation/advanced-cardiovascular-sonography>
 - Joint Review Committee on Accreditation in Cardiovascular Technology (JRC-CVT)
<https://www.jrcvct.org/>
 - Joint Review Committee on Accreditation in Diagnostic Medical Sonography (JRC-DMS)
<https://www.jrcdms.org/>

Sonography Facility Accreditation Standards

- American College of Radiology (ACR)
<https://www.acraccreditation.org/>
- American Institute of Ultrasound in Medicine (AIUM)
<https://aium.org/accreditation/accreditation.aspx>
- Intersocietal Accreditation Commission (IAC)
<https://intersocietal.org/>

Sonography National Education Curriculum (NEC)

- <https://jrcdms.org/nec.htm>

Sonography Practice Parameters, Standards, Guidelines, and Position Statements

- American College of Radiology (ACR): Practice Parameters and Technical Standards
<https://www.acr.org/Clinical-Resources/Practice-Parameters-and-Technical-Standards>
- American Institute of Ultrasound in Medicine (AIUM): Practice Parameters
<https://www.aium.org/resources/guidelines.aspx>
- American Society of Echocardiography (ASE): Guidelines
<https://www.asecho.org/guidelines-search/>
- American Society of Radiologic Technologists (ASRT): Professional Practice
<https://www.asrt.org/main/standards-and-regulations/professional-practice>
- American Vein & Lymphatic Society (AVLS): Clinical Guidelines
<https://www.myavls.org/member-resources/clinical-guidelines.html>
- International Contrast Ultrasound Society (ICUS): Sonographer Scope of Practice Policy Statement
<https://icus-society.org/icus-sonographer-scope-of-practice-policy-statement-9-2018/>
- Society for Vascular Ultrasound (SVU): Professional Performance Guidelines
<https://www.svu.org/practice-resources/professional-performance-guidelines/>
- Society of Diagnostic Medical Sonography (SDMS): Position Statements
<https://www.sdms.org/about/who-we-are/sdms-position-statements>

APPENDIX B. *(continued)*

Sonographer Job Descriptions (Models/Templates)

- Committee on Accreditation of Advanced Cardiovascular Sonography (COA-ACS)
(includes ACS Sample Job Description Templates)
<https://caahep-public-site-5be3d9.webflow.io/committees-on-accreditation/advanced-cardiovascular-sonography>
- Society of Diagnostic Medical Sonography (SDMS) Model Job Descriptions *(includes Staff Sonographer, Lead Sonographer, Advanced Sonographer, and Sonography Manager)*
<https://www.sdms.org/resources/careers/job-description>

State Medical Boards

- <https://www.fsmb.org/contact-a-state-medical-board/>

State Sonographer Licensure

- <https://www.sdms.org/advocacy/state-licensure>

Work-Related Musculoskeletal Disorders (WRMSD) Resources

- Industry Standards for Prevention of Work Related Musculoskeletal Disorders in Sonography
<https://www.sdms.org/docs/default-source/Resources/industry-standards-for-the-prevention-of-work-related-musculoskeletal-disorders-in-sonography.pdf>