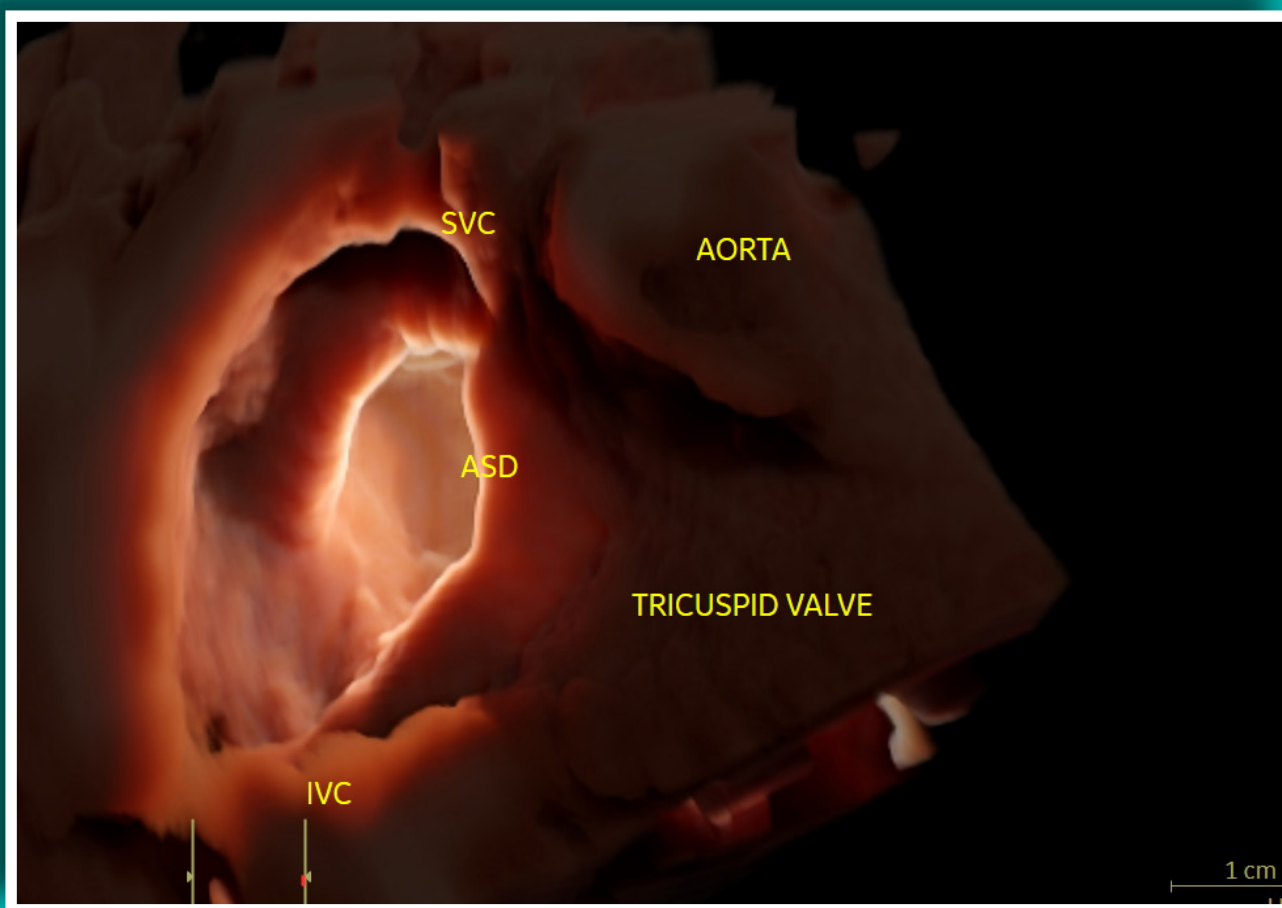


ECHO



4

**A Year of Adaptive
Stewardship, Focus,
and Purpose**

*Protecting the People
Behind Every Echocardiogram*

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*Collaboration in Action:
2026 ASE IRT Think Tank*

23

*Leadership Beyond
Clinical Excellence*

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2026/2027 EDUCATION CALENDAR

AUGUST 2026

6th Annual Advanced Imaging Techniques for Sonographers Virtual Experience

August 29-30, 2026

Jointly provided by ASE and the ASE Foundation

OCTOBER 2026

Echo Florida

Disney's Grand Floridian Resort & Spa
Lake Buena Vista, Florida

October 17-19, 2026

Jointly provided by ASE and the ASE Foundation

NOVEMBER 2026

5th Annual Echo in Pediatric & Congenital Heart Disease: Virtual Experience

November 15-16, 2026

Jointly provided by ASE and the ASE Foundation

JANUARY 2027

SAVE THE DATE

Echo Hawaii

January 18-21, 2027

Fairmont Orchid, Kohala Coast,
Big Island, HI.

Jointly provided by ASE and the ASE Foundation

"A Whale of a Tail"

Kurt Bjorkman, MD, Gabrielle Bowman
RDCS (AE, PE), Corewell Health-Helen
DeVos Children's Hospital, Michigan
State University College of Human
Medicine, Grand Rapids, MI

FEBRUARY 2027

SAVE THE DATE

State-of-the-Art Echocardiography

March 12-14, 2027

Westin Kierland Resort & Spa,
Scottsdale, AZ

Jointly provided by ASE and the ASE Foundation

JUNE 2027

SAVE THE DATE

38th Annual Scientific Sessions

June 4-6, 2027

Tampa Convention Center,
Tampa, FL

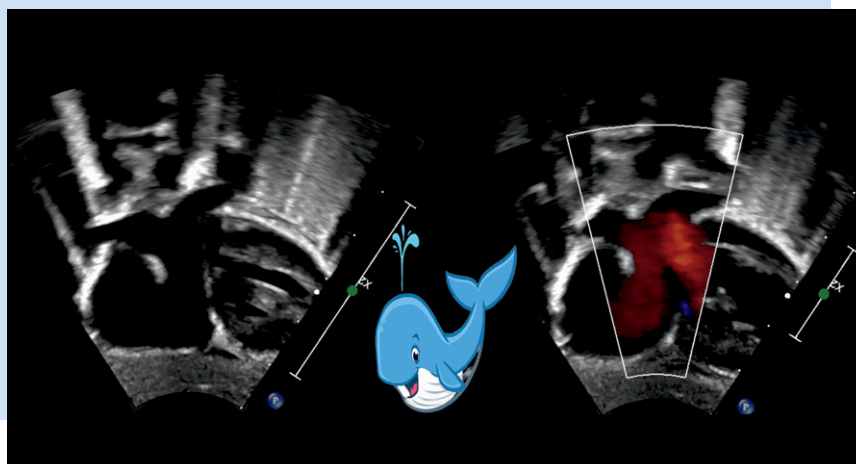
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Discounted rates for ASE members.

To learn more and register, visit us at

ASEcho.org/Education-Events.

This text also appears in the July/August issues of JASE. OnlineJASE.com



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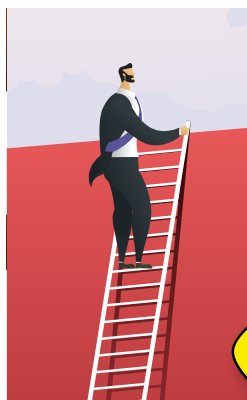
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 American Society of Echocardiography

Cover art: "ASD In The Spotlight" Jose Carlos Villalobos-Lizardi, MD, Tracy Scheulen RDCS, and Garick Hill, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

EDITORS' NOTE

ASE is very grateful to our members who contribute to *Echo* magazine and values their willingness to share personal insights and experiences with the ASE community, even if they may not be in total alignment with ASE's viewpoint.

President's Message for *July*

A YEAR OF ADAPTIVE STEWARDSHIP, FOCUS, AND PURPOSE

Contributed by Cynthia C. Taub, MD, MBA, FASE, is Edward C. Reifstein Endowed Professor and Chair of Medicine at the State University of New York Upstate Medical University, Norton College of Medicine. She has been a member of ASE since 2002.

上善若水 *the greatest virtue is like water*

—*Dao De Jing (an ancient Chinese classic text)*

“

Our responsibility as a professional society is not to hold the shoreline in place firmly, but to ask ourselves where to reinforce, where to redesign, and where to deliberately let go.

I sat on the front porch of my lake house in Upstate New York, watching the waves gather force. At first, in the early morning, there is resistance with an instinct to fix, to reinforce, to reclaim. The structures we build, our patios, our plans, our sense of control, are temporary agreements with a world that never signed the contract. At sunset, I witnessed the worst flooding for this region in the past two decades.

To observe something so powerful, so unyielding, is to understand that change in the world cannot be stopped. Disruptive and transformative technology is not something we fight. It is something we learn to stand within, to guide, and to facilitate its clinical application. Our responsibility as a professional society is not to hold the shoreline in place firmly, but to ask ourselves where to reinforce, where to rede-sign, and where to deliberately let go.

I will share something personal with you. As a child, I lost most of my vision in the left eye in an accident. I grew up being “othered,” often ridiculed, yet determined not to let limitation define trajectory. I was drawn to Helen Keller’s writing, especially the idea that vision is not simply sight, but purpose. I did

not envision that I would leave my homeland and one day serve as President of the American Society of Echocardiography. But I learned early that clarity does not come from seeing more. It comes from seeing what matters.

The horizon before us was charted by those who came before, legends in echocardiography, educators, and scientists, who built ASE into the global leader it is today. Under my leadership, you will not see a year of forceful disruption. It will be a year of adaptive stewardship. Our responsibility is to guide the ship steadily toward that horizon with clarity, humility, and purpose, despite waves and wind at sea.

A CLEAR AND UNIFYING VISION

Our vision is straightforward: **to advance cardiovascular care by leading the world in high-quality, patient-centered, and equitable echocardiography through education, innovation, and collaboration.**

This vision is deliberately simple. Clarity allows alignment. Alignment allows impact.

The 4Cs: ASE as an interconnected ecosystem

ASE's strategic goals are not separate pillars (Figure 1 2025-28 strategic goals). They are interconnected expressions of who we are, which were brought to life through four essential forces: (Figure 2)

- **Credibility** builds trust.
- **Catalyst** drives progress.
- **Connectivity** spreads knowledge.
- **Community** sustains people.

Together, they form a reinforcing cycle: Credibility → Catalyst → Connectivity → Community → back to Credibility.

If ASE did not exist, we would not merely lose guidelines or meetings, we would lose our shared language, our professional home, and the place where our passion for echocardiography belongs.

FIGURE 1 ASE 2025-2028 Strategic Goals with Four Areas of Focus(4C's).



FOUR AREAS OF FOCUS FOR THE YEAR

1. Community: our greatest strength is our people

Belonging is not incidental to excellence, it enables it. We will strengthen mentorship, sponsorship, and early-career engagement through the *Fellows-in-Training and Student Taskforce*, *Lab Directors' Forums*, and leadership development.

ASE thrives when members show up, across career stage, geography, and discipline.

2. Credibility: quality is our North Star

Our guidelines are not academic exercises, they are contracts of trust.

Through the *Guideline Impact Taskforce*, we will ensure that guidelines move from:

Evidence → Guideline Publication → Dissemination → Adoption → Measurable Impact

By aligning research, dissemination, implementation tools, and advocacy, we will define success not by publication, but by changing clinical practice.

3. Connectivity: echocardiography without borders

Our mission is to innovate through collaboration. ASE does not merely participate in the imaging ecosystem, ASE convenes it.

ASE will strengthen intersocietal partnerships, global education, and regional engagement. Through a toolkit for local society development and expanded regional courses, we will extend excellence closer to where clinicians practice. We will be hosting disease specific webinars throughout the year along with ASNC, SCCT, and SCMR, and collaborating on training initiatives for hospitalists, obstetricians, APPs, and more. ASE will align with ASEF to support continued global outreach projects to partners in developing countries.

4. Catalyst: innovation with guardrails

Artificial intelligence and automation are transforming echocardiography. The question is not whether, but how. ASE will lead by establishing standards for responsible AI integration, addressing bias, and ensuring technology enhances workflow optimization and clinical reasoning.

Innovation must serve patients. And it must serve clinicians.



FIGURE 2 ASE at the center of innovation.

THE DISCIPLINE OF FOCUS

Our charge is not simply to keep pace with change, but to shape it thoughtfully and deliberately. The greatest poverty is not resources. It is attention. This year, we will simplify and focus on accountable governance, transparent decision-making, strategic partnerships aligned with ASE values, and financial stewardship for long-term stability.

Vision without execution is aspiration. Execution makes vision durable.

A SHARED RESPONSIBILITY

ASE is not defined by any one leader or moment. It is defined by its members. My role as President is not to set direction alone, but to listen, align, and support the extraordinary expertise within our Society. Its future will be shaped by those who teach, question, innovate, and importantly, who show up. Together, we will ensure that echocardiography remains not only relevant, but indispensable to cardiovascular care worldwide.

And I will strive to make this year of service worthy of your trust.

This text also appears in the July issue of JASE [OnlineJASE.com](https://www.onlinejase.com)

President's Message for *August*

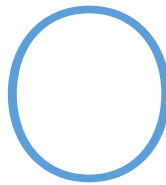
“A KIND HEART IS THE SIGN OF A GOOD LIFE”: WHAT NEPAL TAUGHT US ABOUT THE FUTURE OF CARE



Contributed by **Cynthia C. Taub, MD, MBA, FASE**, Edward C. Reifstein Endowed Professor and Chair of Medicine, State University of New York Upstate Medical University, Norton College of Medicine, Syracuse, NY; **Biraj M. Karmacharya, MBBS, PhD, MPH, MS**, Administrative Director, Dhulikhel Hospital and Chief Administrative Officer, Kathmandu University School of Medical Sciences, Panauti, Nepal; and **Rajendra Kaju, MD**, Interventional Cardiologist, Department of Internal Medicine (Cardiology), Dhulikhel Hospital, Kathmandu University School of Medical Sciences, Panauti, Nepal

“

Care in Dhulikhel extends beyond the hospital walls. Community health workers serve as the connective tissue of the system, bringing preventive care, education, and early screening directly into villages.



On the wall of Dhulikhel Hospital, just outside Kathmandu, a simple sentence reads: “A kind heart is the sign of a good life.” At Dhulikhel, it is not merely their north star, it is their ground truth.

During the ASE Foundation global outreach visit to Nepal in March 2026, we encountered a healthcare system that began with a bold but simple vision: to provide quality healthcare to all (*see photo collage on next pages*).

Thirty years ago, Dhulikhel Hospital was founded as the pioneering community-based health institution in Nepal. It started as a modest 25-bed hospital but soon became one of the fastest growing health institutions in the country, currently functioning as a 450-bed major tertiary hospital. Beyond its clinical excellence, Dhulikhel Hospital has become a cornerstone of health professional education in Nepal. Its undergraduate, postgraduate, and fellowship programs across medicine, nursing, public health, physiotherapy, and laboratory sciences have set a benchmark for academic rigor and innovation.



Dhulikhel Hospital



A sign in the lobby of Dhulikhel Hospital

A reunion of some team members from ASE, Chinese Society of Echocardiography (CSE), and Cardiac Society of Nepal at the CSE Annual Scientific Sessions in Shanghai, China (May 2026)



This system was not built on excess resources, but on clarity of purpose.

Care in Dhulikhel extends beyond the hospital walls. Community health workers serve as the connective tissue of the system, bringing preventive care, education, and early screening directly into villages. Health is not episodic, but continuous, relational, and local. The goal is not simply to treat disease, rather, to intercept it early or prevent it altogether.

This stands in sharp contrast to the US healthcare model, where we excel at treating advanced disease with sophisticated procedures



A view of the valley that houses a medical school, a dental school, a nursing school, an ultrasound training center, and the hospital



Dr. Biraj Karmacharya pointing to a dirty road led to what now a modern hospital

and technologies. Our strength lies in intervention. But too often, we enter the patient life journey late.

In Dhulikhel, prevention is foundational. Access is not defined by wealth, but by proximity, trust, and presence. What is most striking is that resource limitation has enabled and refined innovation. Solar panels power the hospital. Local industries contribute to sustainability. Training programs cultivate a self-sufficient workforce. Every element of the system reflects intentional design toward a singular mission: healthcare for all.

But perhaps the most powerful lesson is less structural and more human.

There is a deep sense of connection between caregivers and patients, between the hospital and the community, and between past, present and future. Care is delivered with dignity, patience, and respect.

For us, as a cardiovascular imaging community, this experience invites for reflection. Can echocardiography move more upstream that enables earlier detection of structural heart disease, risk stratification, and ultimately prevention of disease? Can echocardiography move closer to where patients live, sometimes many hours away from a hospital or a clinic? The answer is a resounding “YES” to reduce disparities in access.

Dhulikhel does not offer a model to replicate without context. It offers something more valuable, a lens through which to re-examine our assumptions.

This text also appears in the August issue of JASE [OnlineJASE.com](https://onlinejase.com)

Cynthia Taub,
MD, MBA, FASE
ASE President



How to Climb the Career Ladder Successfully

Contributed by **Allyson Boyle, MHA, ACS, RDCS, FASE**, Sanger Heart and Vascular Institute - Atrium Health, Cornelius, NC; **Suzanne Poston, BS, ACS, CCT, RCCS, RCS, RDCS, RVS, FASE**, UT Health Science Center, Canyon Lake, TX; **Steven Walling, BS, ACS, RCS, RDCS, FASE**, Saint Francis Hospital and Medical Center, Hartford, CT; **Margaret M. Park, BS, ACS, RVT, RDCS, FSDMS, FASE**, Cleveland Clinic, Cleveland, OH; **Joshua Pearson, RCS, FASE**, Phoebe Putney Memorial Hospital, Albany, GA



Introducing a career ladder in a lab or hospital setting requires thoughtful planning, and the first—and most crucial—step is securing support from leadership.

A CAREER LADDER is a structured professional development program designed to help healthcare professionals, including cardiovascular sonographers, advance their careers by developing their clinical skills, education, and leadership abilities. Employers and their managers are usually expected to create such programs and pathways for career growth, with the hope of decreasing employee turnover to support organizational stability. Career advancement may be directed by managers who are not in the ultrasound field. It is in this instance that management should encourage professional sonographers to explore practice opportunities and personal goals annually.

In this article, the American Society of Echocardiography, along with dedicated cardiovascular professionals, will highlight the process for determining a career ladder for a cardiovascular sonographer. This article will address the following issues: how an organization may implement a sonography career ladder, the key steps to climb

the career ladder, and the challenges and/or obstacles a sonographer may encounter while moving forward professionally.

Implementing the Career Ladder

Introducing a career ladder in a lab or hospital setting requires thoughtful planning, and the first—and most crucial—step is securing support from leadership. With leadership backing, it becomes much easier to engage individual departments and key stakeholders for review and approval.

To strengthen your proposal, bring supporting materials such as the Clinical Ladder paper and use available tools to draft a version tailored to your institution. This preparation not only helps clarify the vision but also builds momentum for implementation.

Customizing responsibilities for advanced level sonographers will vary by lab, but doing so can significantly enhance both staff's retention and clinical quality. By aligning advanced tasks with departmental goals, you ensure that high quality echocardiograms are consistently performed—ultimately improving patient care.

Key Steps to Climb the Career Ladder

Set Clear Career Goals

Establishing clear career goals is the foundation of professional growth. Goals provide direction, motivation, and a framework for decision making. Whether aiming for advanced clinical roles, leadership positions, or academic contributions, defining objectives helps prioritize efforts and measure progress. Goal setting also fosters accountability and encourages regular self assessment. Importantly, aligning personal

aspirations with organizational opportunities ensures a more fulfilling and strategic career path. By revisiting and refining goals annually, sonographers can stay focused, adapt to evolving interests, and remain proactive in their development—ultimately driving both individual success and improved patient care.

Develop Relevant Skills

Echocardiography is a cornerstone of cardiovascular diagnostics, offering real time imaging that plays a critical role in patient assessment and treatment planning. As technology advances and clinical expectations rise, mastering this skill requires more than initial training—it demands a commitment to continuous learning.

Competency in cardiac ultrasound goes beyond technical ability. It requires a deep understanding of anatomy, pathophysiology, and evolving imaging modalities. Innovations such as 3D echocardiography, strain imaging, and contrast studies are reshaping the field, making it essential for clinicians to stay current to ensure accurate interpretation and optimal care.

Pursuing additional/complementary imaging credentials through continued education and training or advanced certifications such as the Advanced Cardiac Sonographer (ACS) demonstrates. These credentials validate expertise, enhance credibility, and open doors to leadership roles and specialized positions.

Why Ongoing Education Matters

In such a rapidly evolving specialty, continued education is not optional—it is essential. Key benefits include:

- Improved diagnostic accuracy: Staying updated



with new techniques sharpens interpretive skills.

- Better patient outcomes: Enhanced diagnostics lead to more precise treatment plans and timely interventions.
- Career growth: Advanced education supports advancement into leadership, teaching, or specialized roles.
- Adaptability: As technologies like AI assisted imaging emerge, continued learning ensures clinicians remain current.
- Professional credibility: Ongoing education signals dedication to best practices and high standards.
- Certification maintenance: Many credentials require regular CME (Continuing Medical Education) credits.

Taking Initiative: A Personal Approach

To strengthen my skills, I took proactive steps both inside and outside the clinic. I attended grand rounds and conferences, joined professional societies such as the American Society of Echocardiography (ASE), and engaged in independent study. I practiced new techniques during routine scans and sought feedback from physician readers to refine my interpretation skills.

I also explored multimodality imaging—including cardiac MRI and CT—to broaden my diagnostic perspective. Connecting with mentors and peers helped me stay inspired and informed, while vendor sponsored CME courses kept me updated on the latest technologies.

Build a Strong Network

Building a strong professional network is an essential component of career advancement. Meaningful connections provide opportunities for mentorship, collaboration, and professional growth that extend beyond daily clinical responsibilities. Mentors can offer guidance, share lessons learned, and assist with navigating career decisions, while peer relationships foster knowledge exchange and support. Networking through professional societies, conferences, committees, and interdisciplinary collaboration exposes sonographers to emerging practices and leadership opportunities. Over time, these relationships can open doors to new roles,

Establishing clear career goals is the foundation of professional growth. Goals provide direction, motivation, and a framework for decision making.

projects, and advocacy efforts, helping individuals align personal goals with organizational and professional advancement.

Gain Experience and Take Initiative

Gaining experience beyond routine clinical duties is a powerful way to advance along the career ladder. Volunteering for departmental projects, quality improvement initiatives, or committee work demonstrates engagement and a willingness to contribute to the broader goals of the organization. Taking initiative—such as assisting with onboarding, student education, protocol development, or new technology implementation—builds leadership skills and visibility. These opportunities allow sonographers to develop problem solving abilities, strengthen interdisciplinary relationships, and showcase readiness for advanced roles. Proactively seeking out stretch assignments supports both individual growth and departmental success.

Showcase Your Achievements

Effectively communicating your achievements is essential for career advancement. Maintaining a record of accomplishments—such as certifications earned, quality improvement contributions, leadership roles, or positive patient and physician feedback—helps clearly demonstrate your value. Sharing outcomes during perfor-

mance evaluations, goal setting discussions, or career ladder reviews allows leaders to recognize your impact. Using measurable results, when possible, strengthens credibility and aligns contributions with organizational goals. Confidently advocating your work is not self promotion; it is a necessary step in ensuring efforts are acknowledged, supported, and considered when advancement opportunities arise.

Challenges You Might Face

When implementing a new professional growth program—or any other process—within a healthcare system, there is always potential for pushback from administration, sonographer staff, or the Human Resources department. A preferred approach is to begin with sonographer education about the career ladder to build staff support and buy in. Successful implementation can prevent stagnation, promote engagement, and help retain experienced staff members.

The next step is identifying a champion in administration to help present the career ladder to senior leadership and HR. A manager or director within the cardiac service line can effectively communicate the benefits of the program. Depending on organizational size, approval from a vice president or senior vice president may be required before HR and compensation teams conduct a pay scale analysis. While this process may be lengthy, it is worthwhile if implementation results in a more engaging and satisfying work environment.

In conclusion, a career ladder is a structured professional development program designed to help healthcare professionals, including cardiovascular sonographers, advance their careers by developing clinical skills, education, and leadership abilities. This article highlighted the process of determining a career ladder

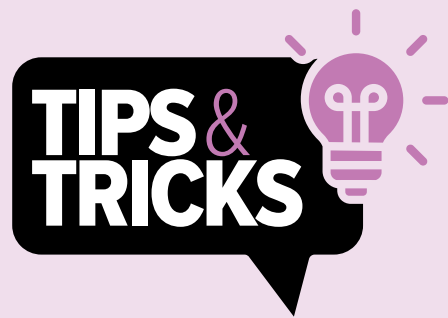
for the cardiovascular sonographer, from organizational implementation to individual strategies for advancement.

Organizations that create opportunities for career progression motivate and encourage employees, reduce turnover, and foster engagement. Engaged and ambitious staff members contribute to quality improvement efforts, ultimately leading to better patient care outcomes.

► [Download the fillable Career Ladder form.](#)

Organizations that create opportunities for career progression motivate and encourage employees, reduce turnover, and foster engagement.





“Make every detail perfect and limit the number of details to perfect.”

– Jack Dorsey

As congenital cardiac imagers, we appreciate the value of sharing tips and tricks amongst colleagues at our institutions. Considering this, the Pediatric & Congenital Heart Disease Council believes that our section of the Echo magazine may be a great avenue to share our tricks of the congenital cardiac imaging trade with colleagues across the globe.

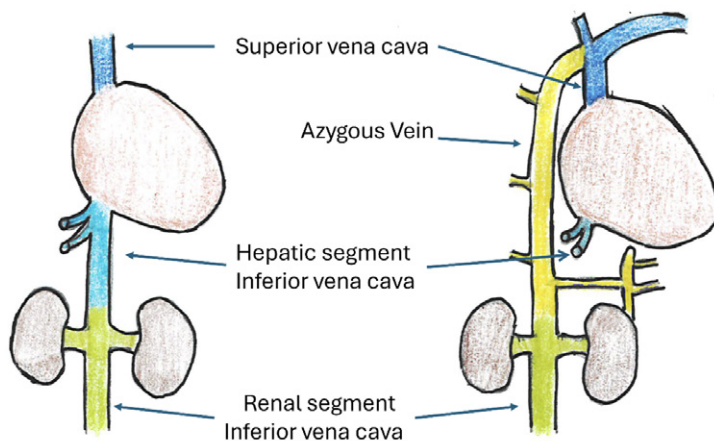


By **Tracy Ralston, RDCS, FASE**, Duke University Hospital, Durham, NC; **Elena N. Kwon, MD, FASE**, Children’s Hospital at Montefiore, Bronx, NY

How to Find an Interrupted Inferior Vena Cava

BACKGROUND:

Interrupted inferior vena cava (IVC) is a rare congenital anomaly often discovered incidentally. It is defined as an absence of the hepatic segment of the inferior vena cava rerouting the blood from the lower body through the azygous or hemi-azygous continuation to either the right or left superior vena cava.



Intact Inferior Vena Cava

Interrupted Inferior Vena Cava

Normally, the azygous and hemi-azygous drain into the superior vena cava, therefore, if the hepatic segment of the IVC is absent, the renal segment continues through the azygous system to the SVC.

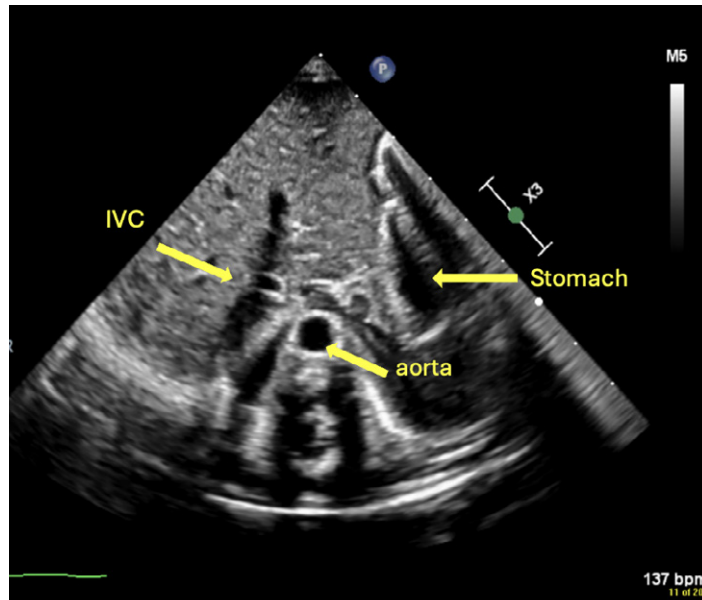
Interrupted IVC is commonly associated with heterotaxy (polysplenia type) and complex congenital heart disease but occasionally it can occur in isolation with a normal heart.

It is important to identify interrupted IVC, especially for patients undergoing surgical repair and any surgery requiring redirection of systemic veins (i.e.: Fontan).

Subcostal evaluation: Probe notch at 3 o'clock

Intact IVC looking down at the spine

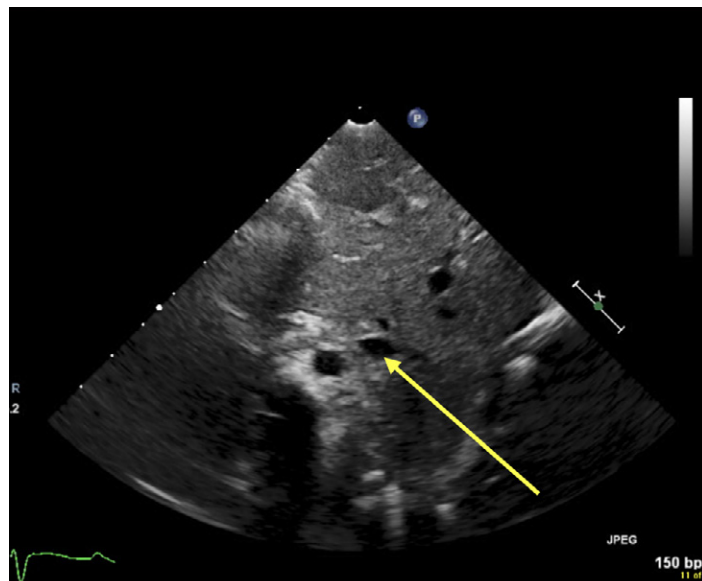
Anatomy you should identify is visceral situs, abdominal aorta position, and IVC position. The aorta is located leftward over the spine, under the diaphragm. The IVC is rightward up in the liver above the diaphragm. The stomach should be on the patient's left.



Left sided IVC

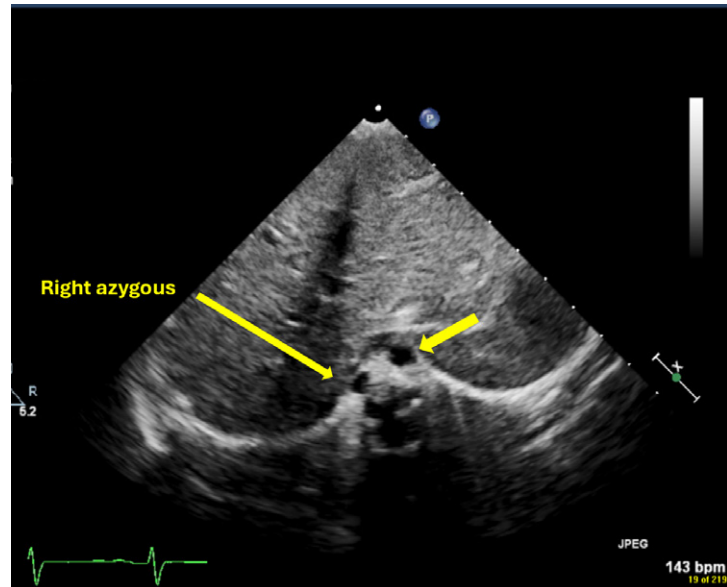
In addition to finding an interrupted IVC, the short axis view (notch at 3:00) of the spine can also be helpful with IVC location. Look at this next image and find the IVC.

The aorta is in the normal position on the left above the spine (under the diaphragm). The IVC is a left IVC located next to the aorta but in the liver (yellow arrow). A great skill to practice is to slowly sweep the IVC, following it to the where it drains. In this patient, it drained into the left sided atrium.



Interrupted IVC with dilated right azygous

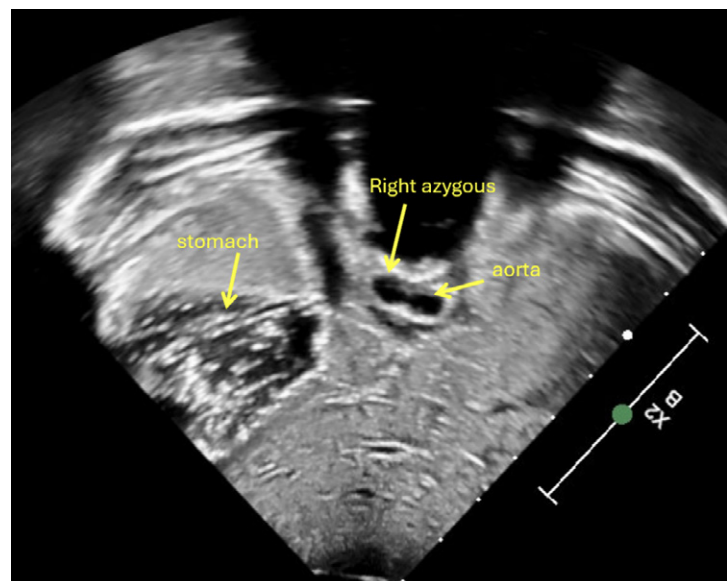
The image to the right shows the absence of the IVC in the liver. The additional venous circle seen posterior to the aorta is a dilated right azygous prominent and similar to an intact IVC but different location.



Interrupted IVC looking up at the spine

Patient with heterotaxy and abdominal situs inversus.

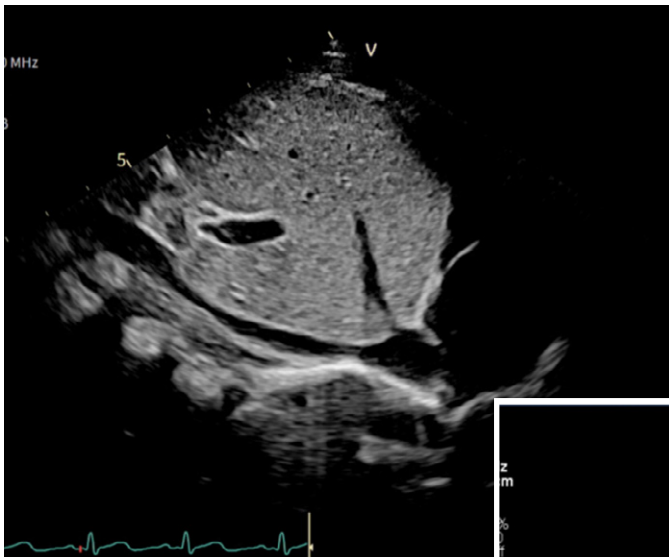
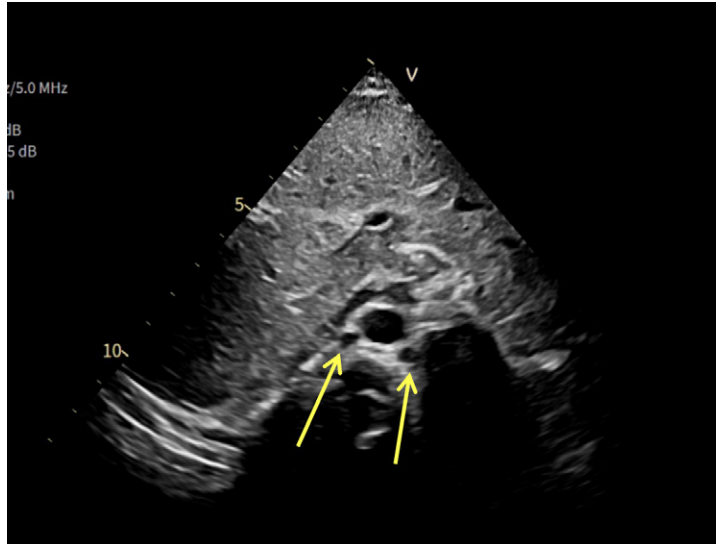
In patients with heterotaxy the liver can appear midline or leftward and the stomach can be seen on the right as in this patient with abdominal situs inversus. The above image shows the absence of the IVC in the liver. You will can see a “double bubble” under the diaphragm, one being the abdominal aorta, the other the azygous.





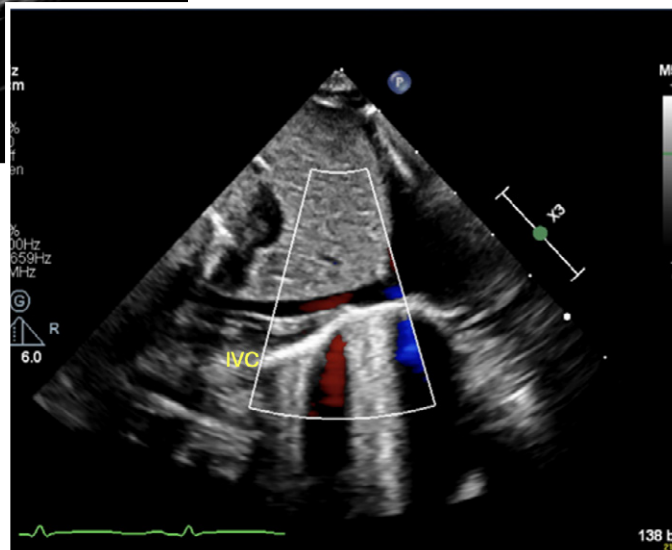
Interrupted IVC with a left AND right azygous

This image demonstrates looking down at the spine we cannot see the IVC in the liver but there are two smaller azygous veins seen one on each side and posterior to the abdominal aorta (yellow arrows), the left is slightly bigger.

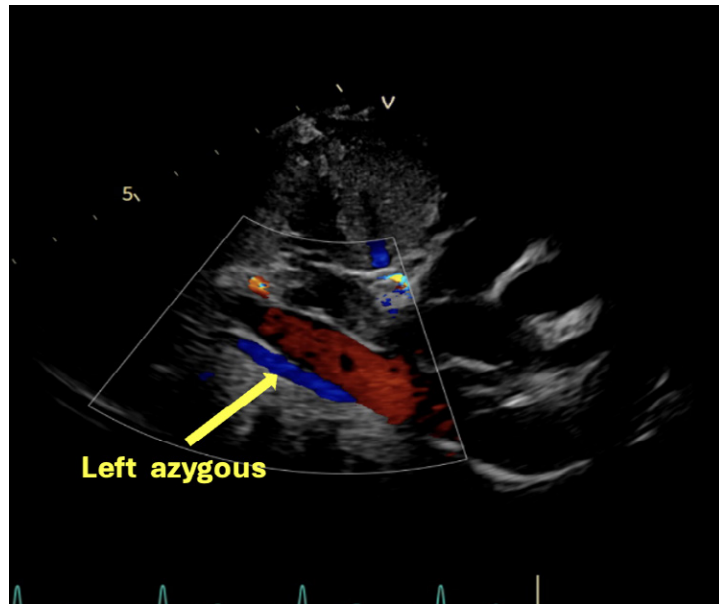


Subcostal evaluation: Probe notch at 12 o'clock angled to patient's right

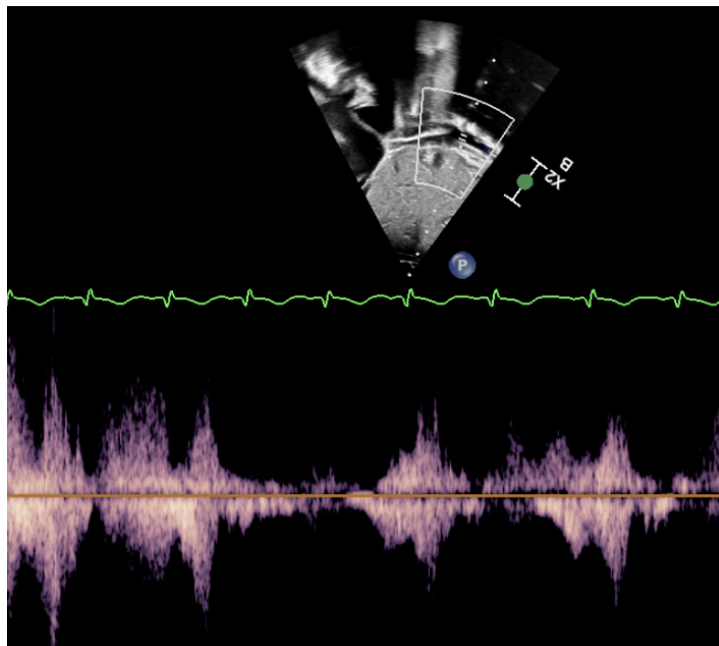
To prove an intact IVC, it is essential to show the length of the IVC all the way through the liver and draining into the right atrium (the atrium closest to the probe).



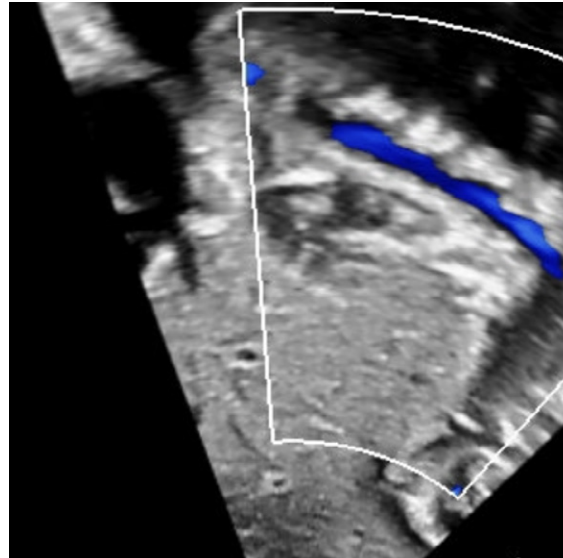
When the IVC is interrupted it will be difficult to find the IVC draining to the right atrium and you will see a dilated venous flow posterior to the aorta which is a dilated azygous. Here is an image with color of an abdominal aorta with a left azygous seen posteriorly. Note the aorta flow is going to the lower body (red), the azygous is returning blood to the heart (blue).



The Doppler pattern of the azygous will consistent with systemic vein flow.



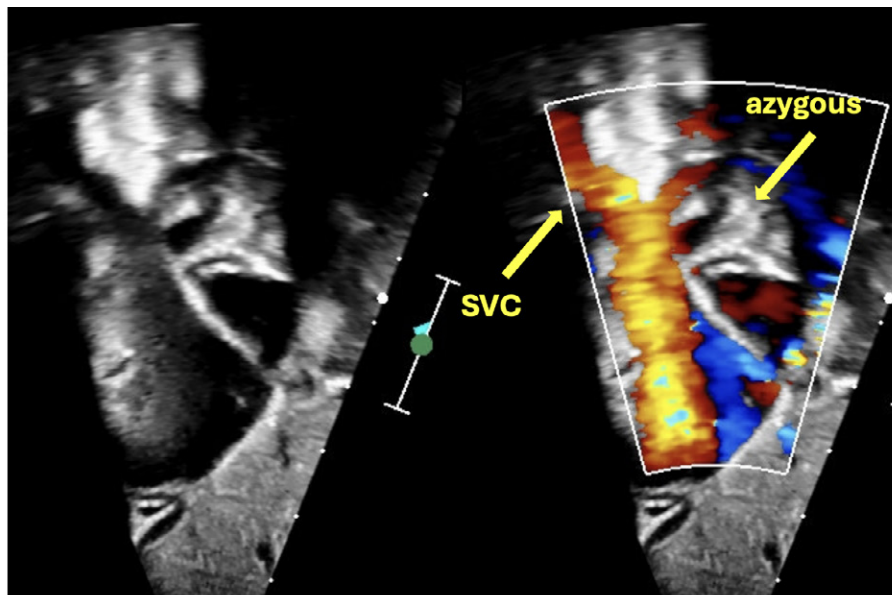
With the image inverted and notch at 6 o'clock angled posteriorly and rightward you can see a venous structure posterior to the aorta in the image below (blue).



High right parasternal view :

Probe notch at 10 o'clock

You can follow the azygous and see it entering into the superior vena cava (SVC) in the subcostal shortaxis angled towards the right.



TIPS & TRICKS

- If you see a double bubble next to the abdominal aorta, suspect azygous continuation
- Don't mistake the azygous for the IVC, the IVC is encapsulated in the liver
- IVCs are harder to find in newborns and micro-premies due to low volume, use the lightest touch to avoid compressing the IVC
- If you have a difficult time finding the IVC, go back to notch at 12:00 and see if you can find a prominent azygous



Protecting the People Behind Every Echocardiogram

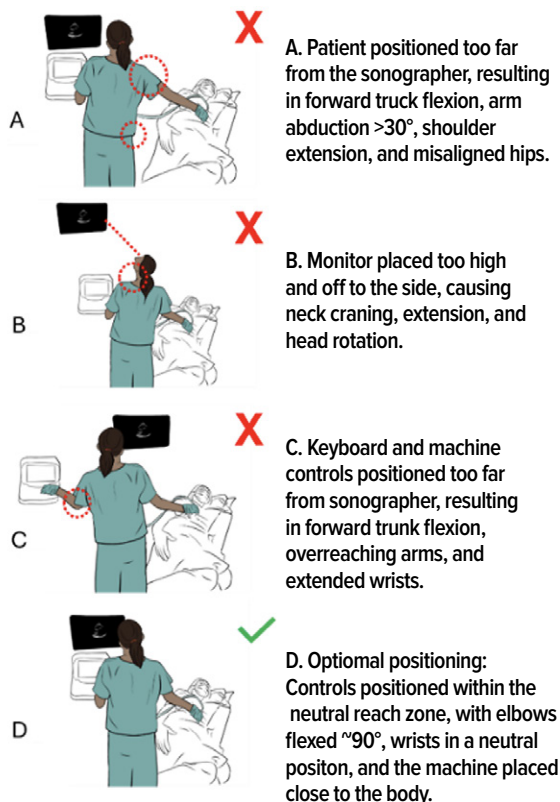
Moving from Injury Awareness to Injury Prevention



Contributed by **Ashlee Davis, ACS, RDCS, RCCS, FASE** & **Allyson Boyle, MHA, ACS, RDCS, FASE**

For decades, work-related musculoskeletal disorders (WRMSDs) have been recognized as one of the greatest occupational hazards facing cardiac sonographers. Most professionals entering the field are aware that scanning is physically demanding, yet many also accept shoulder pain, neck pain, or wrist discomfort as an unavoidable consequence of the profession. Unfortunately, that expectation has become deeply ingrained in our culture.

RIGHT



LEFT

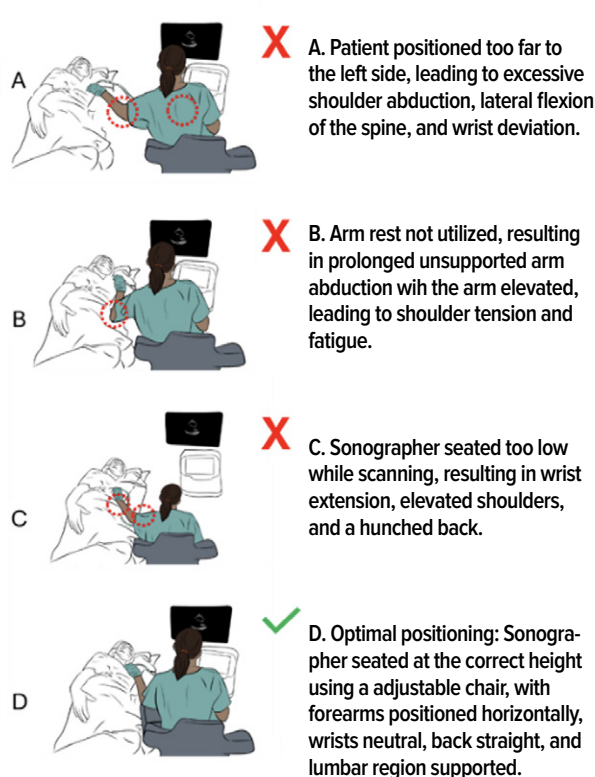


FIGURE 1 Examples of improper (A-C) and proper (D) ergonomic positioning for right- and left-handed cardiac sonographers. Optimal alignment helps reduce physical strain and supports high-quality image acquisition. (This figure is a combination of Figure 1 and Figure 2 from Guidelines for the Prevention of Work-Related Musculoskeletal Disorders for Cardiac Sonographers: Recommendations from the American Society of Echocardiography, published in the August 2026 *Journal of the American Society of Echocardiography*. Reprinted with permission from Elsevier Inc. on behalf of ASE.)

The August 2026 issue of JASE includes a [Guideline for the Prevention of Work-Related Musculoskeletal Disorders for Cardiac Sonographers](#) which challenges that assumption. More importantly, it encourages us to think differently about why these injuries occur and what it will take to prevent them.

One of the most important lessons from developing the guideline was realizing that this is not simply a sonographer problem. While individual scanning technique certainly matters, the physical demands of echocardiography are influenced by many

Equipment design, exam room layout, scheduling practices, organizational priorities, education, and workplace culture all contribute to the risk of injury.

factors that extend well beyond the person holding the transducer. Equipment design, exam room layout, scheduling practices, organizational priorities, education, and workplace culture all contribute to the risk of injury.

Preventing WRMSDs requires shared responsibility across the entire echocardiography community, including sonographers, physicians, lab leaders, administrators, educators, manufacturers, and professional societies. This broader perspective is essential if we want to move from simply recognizing injuries to preventing them.

Why It Matters Beyond Comfort

This shift in perspective is important because the consequences of WRMSDs extend far beyond physical discomfort. Experienced sonographers who leave the bedside because of pain take with them years of technical expertise, clinical judgment, and mentorship. At a time when many laboratories are already challenged by workforce shortages, preserving the health and longevity of experienced professionals is essential for the future of cardiovascular imaging.

Perhaps less appreciated is the relationship between sonographer well-being and examination quality. When sonographers are able to scan comfortably, they can devote their attention to obtaining the best possible study. They are more likely to spend the extra time optimizing an imaging window, adjusting for the ideal Doppler angle, or fully interrogating a challenging valve lesion rather than simply completing the examination. Physical discomfort competes for attention; ergonomic scanning allows that attention to remain focused on the patient. In that sense, ergonomics is not separate from quality. It helps make quality possible.

For physicians, this connection is especially important. High-quality echocardiography depends not only on advanced technology and skilled interpretation, but also on the ability of sonographers to consistently acquire optimal images. Supporting ergonomic practices helps protect the workforce while also supporting diagnostic accuracy, image quality, and patient care.

Ultimately, the goal is not simply to reduce injury rates. It is to create echocardiography laboratories that are intentionally designed to protect and preserve the professionals who perform these examinations.

Practical Steps for Healthier Workflow

Meaningful change requires a shared effort, but there are practical steps each stakeholder can take today.

Sonographers should approach every examination with the same attention to ergonomic setup that they give to image optimization. Proper positioning is part of delivering excellent patient care.

Manufacturers should continue designing systems that reduce physical strain while maintaining exceptional image quality. Administrators should view ergonomic equipment as a long-term investment in employee retention, clinical excellence, and sustainable staffing.

Lab leaders can support these efforts by developing scheduling and workflow practices that acknowledge the physical demands of scanning. This includes creating workflows that allow sonographers to position patients safely, take appropriate breaks when possible, and build sustainable careers in the field.

Ultimately, the goal is not simply to reduce injury rates. It is to create echocardiography laboratories that are intentionally designed to protect and preserve the professionals who perform these examinations. If we can shift our focus from reacting to injuries to building systems that prevent them, we will not only extend careers, we will strengthen the quality of care delivered to every patient who undergoes an echocardiogram.



COLLABORATION IN ACTION: 2026 ASE IRT THINKTANK

*Contributed by **Natalie Costantino**,
ASE Senior Marketing &
Communications Manager*

The annual ASE Industry Roundtable (IRT) Think Tank is an exclusive benefit for ASE IRT and Accelerator Partners designed to foster collaboration. It brings together industry leaders, clinicians, scientists, and ASE volunteers and staff for interactive, discussion-driven sessions and meaningful exchange about the rapidly evolving field of cardiovascular ultrasound. The Think Tank provides a unique forum to explore emerging technologies, address shared challenges, build relationships, and identify opportunities to advance innovation to improve patient care.

Held May 2-3 in Boston's Seaport District in Massachusetts, the 2026 Think Tank welcomed

a record number of participants, with nearly 130 attendees representing 22 IRT Partners, one Accelerator Partner, and ASE leaders and faculty. Over two days, participants explored strategies to strengthen confidence in echocardiography data, artificial intelligence (AI) and new technologies, education and workforce development, and legislative and regulatory initiatives. The event also featured a keynote address on healthcare standards, reimbursement, and quality measurement, as well as a Structural Heart Imaging Forum.

By bringing together a diverse group of cardiovascular ultrasound professionals and partners, the Think Tank helps shape the future of the field to benefit clinicians and the patients they serve.

Two Days, Seven Engaging Sessions, One Special Forum

DAY 1

ASE 2025-2026 President **David Wiener, MD, FASE**, and ASE Industry Relations Committee Chair **Linda Gillam, MD, MPH, FASE**, began the Think Tank by welcoming attendees, highlighting current and upcoming ASE initiatives, and setting the stage for the weekend's discussions. **Steven Lester, MD, FASE**, facilitated introductions and highlighted the value of the IRT program. He encouraged everyone in the room to think boldly about the future of the field.

Dr. Lester said the IRT program was founded on the idea that “when clinicians and industry can be held together in a structured, mission-driven, non-promotional space, the field can advance in ways that we could not do alone.”



The 2026 ASE IRT Think Tank welcomed a record number of participants with nearly 130 attendees representing 22 IRT Partners, one Accelerator Partner, and ASE leaders and faculty.

The Patient Journey: From Early Detection to Intervention

Moderators **Karima Addetia, MD, FASE**, **Chadi Ayoub, MD, FASE**, and **Pei-Ni Jone, MD, FASE**, joined discussants **Kiran Belani, MD, FASE**, **Carol Mitchell PhD, ACS, RDMS, RDCS, RVT, RT(R), FASE**, **Jyothy Puthumana, MD, FASE**, and **Jennifer Warmsbecker, BS, RDCS, FASE**, to examine how echocardiography can better support coordinated, patient-centered care throughout the patient journey.

Using case examples and open dialogue, the panel identified technology gaps from early detection to intervention and explored how AI could enhance image acquisition, improve screening and earlier disease detection, and expand applications in pediatric and congenital heart disease. Participants highlighted opportunities to advance 3D imaging and quantitative assessment, as well as the need for industry and clinicians' collaboration to develop large, diverse datasets to strengthen AI expansion.



(left to right) Chadi Ayoub, MD, FASE, Pei-Ni Jone, MD, FASE, and Karima Addetia, MD, FASE

Keynote Address: Innovation and Health Policy in 2026

Keynote Speaker **Lee A. Fleisher, MD**, CEO of Rubrum Advising, LLC, and former Chief Medical Officer at the Centers for Medicare & Medicaid Services (CMS), provided a national policy perspective on the future of healthcare standards, reimbursement, and quality measurement and what those changes can mean for cardiovascular ultrasound. Dr. Fleisher challenged attendees to connect innovation with outcomes. He said to consider how echocardiography technologies can demonstrate measurable clinical value to achieve broad adoption.

He discussed CMS's increasing emphasis on evidence generation, value-based care, and long-term sustainability, noting that future reimbursement will depend on technologies improving patient outcomes while also reducing the total cost of care. Additionally, he highlighted the importance of responsible AI development and monitoring the full product lifecycle, including post-market surveillance, to align with evolving regulatory and reimbursement priorities.



(left to right) 2026-2027 ASE President Cynthia Taub, MD, MBA, FASE, Keynote Speaker Lee A. Fleisher, MD, ASE Industry Relations Committee Chair Linda Gillam, MD, MPH, FASE, and ASE 2025-2026 President David Wiener, MD, FASE.

Quality, Consistency, and Trust in Echocardiography Data (Quality Across the Patient Journey)

Moderators **Federico Asch, MD, FASE**, and **Ashlee Davis, BS, RDCS, RCCS, FASE**, joined discussants **Kristen Billick, BS, RCS, RDCS, FASE**, **Dr. Puthumana**, and **Ms. Warmesbecker**, to explore ways to improve the quality, consistency, and reliability of echocardiography data across the patient journey and support a continuum of care. Using the personal case example of

Ms. Billick's mother's experience as a patient, the panel examined how inconsistent image acquisition, interpretation, and reporting can influence clinical decision-making, patient safety, and confidence in echocardiography findings. Recognizing that these challenges are not isolated, participants identified opportunities where industry could help.

Potential solutions included integrating AI and automation into echocardiography workflows to provide real-time guidance, standardizing measurements, flagging reporting discrepancies, and reinforcing adherence to clinical guidelines. Incorporating quality-focused tools directly into imaging platforms, strengthening education and accreditation, and improving reporting practices can support more consistent, high-quality care.



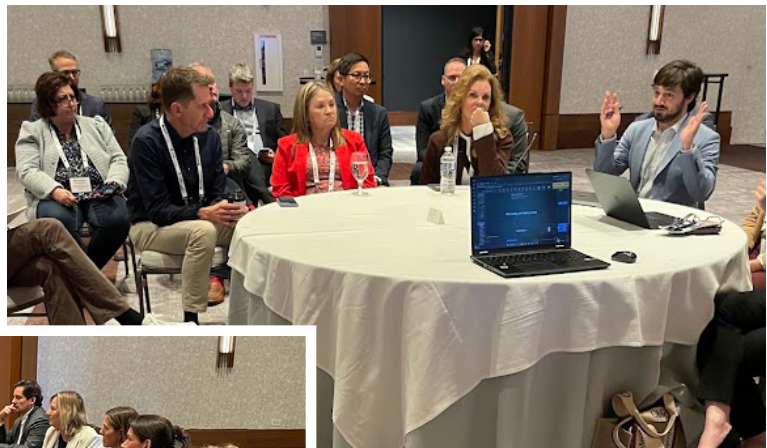
(left to right) 2026-2027 ASE President-Elect Federico Asch, MD, FASE, Ashlee Davis, BS, RDCS, RCCS, FASE, and Kristen Billick, BS, RCS, RDCS, FASE

Meet the Experts: Cardiovascular Ultrasound in Focus

Among the most anticipated agenda items at the Think Tank, the Meet the Experts session offers attendees a dedicated time to connect directly with ASE leaders, faculty, and each other in intimate discussions on emerging trends in cardiovascular ultrasound. The session featured two 40-minute small-group rotations focused on AI, image optimization, workflow, research, and the overall field.

- **Station 1: AI in Clinical Practice—From Validation to Trust**
- **Station 2: Image Optimization & Diagnostic Confidence—Getting It Right the First Time**
- **Station 3: From Detection to Specialty Care—Building Reliable Handoffs**
- **Station 4: Research Engine for the World of Echo**
- **Station 5: Ask the Expert: What's Changing in Echo (and What it Means in Practice)**

During the Meet the Experts session, attendees engaged directly with ASE leaders, faculty, and each other for small-group discussions on emerging trends in cardiovascular ultrasound.



Innovation at Scale: Equity, Access, and Real-World Adoption

Moderators **Salima Qamruddin, MD, MPH, FASE**, and **Megan Yamat, RCS, RDCS, FASE**, joined discussants **Ms. Davis, Jeremy Slivnick, MD, FASE** and **Seda Tierney, MD, FASE**, to examine how innovations in cardiovascular ultrasound can be implemented more broadly while maintaining quality and equity. The panel highlighted education gaps and workforce shortages as critical challenges, noting that differences in sonographer training and technique can contribute to inconsistent diagnostic quality and disparities between academic centers and community hospitals.

This session explored the greatest barriers to adopting point of care ultrasound (POCUS) and AI in everyday practice, including mistrust, workflow integration, data standards, and the need to demonstrate both clinical and financial value to justify investment. Participants discussed establishing consistent approaches to POCUS, increasing transparency around AI validation, and generating real-world evidence to support adoption. Attendees also shared a “wish list” of innovations, such as AI-driven quality assurance dashboards and voice-controlled ultrasound systems to improve efficiency, consistency, and diagnostic confidence.



(left to right) Megan Yamat, RCS, RDCS, FASE, Seda Tierney, MD, FASE, Jeremy Slivnick, MD, FASE, and Ashlee Davis, BS, RDCS, RCCS, FASE

DAY 2

Advocacy Update: Echocardiography Payment—Recent Changes and ASE Advocacy

Vera Rigolin, MD, FASE, joined ASE’s Regulatory Consultant **Denise Garris**, Principal at JDG Advisors, L.L.C., and ASE Director of Advocacy **Katherine Stark** to provide updates on the evolving reimbursement landscape for echocardiography and ASE’s advocacy efforts. In the days leading up to the Think Tank, ASE Advocacy experts participated in the American Medical Association’s CPT meeting.

During this session, they shared the latest insights on the valuation of echocardiography services and implications for payment.

The panel explained how budget neutrality and a declining conversion factor have placed downward pressure on physician payment. They also communicated the role of the CPT and RUC processes in shaping coding and valuation. ASE’s active participation in these processes helps ensure echocardiography services are accurately described, coded, and valued. The panel emphasized ASE’s

ongoing efforts to advocate for fair and sustainable reimbursement through congressional engagement, member education, CPT representation, and broader payment reform. Participants were encouraged to stay informed by maintaining accurate coding and practice data, engaging with specialty societies, and advocating for payment policies that recognize the value and complexity of echocardiography.

(left to right) ASE Director of Advocacy Katherine Stark, ASE Past President Vera Rigolin, MD, FASE, and ASE's Regulatory Consultant Denise Garris



Guidelines into Practice: Translating Standards into Real-World Care

Moderator **Dr. Gillam** joined discussants **Dr. Mitchell**, **Akhil Narang, MD, FASE**, and **Dr. Taub**, to explore how ASE guidelines can be translated into everyday echocardiography practice across diverse clinical settings.

(left to right) ASE Industry Relations Committee Chair Linda Gillam, MD, MPH, FASE, 2026-2027 ASE President Cynthia Taub, MD, MBA, FASE, 2026-2027 ASE Vice President Carol Mitchell, PhD, ACS, RDMS, RDCS, RVT, RT(R), FASE, and 2026-2027 ASE Treasurer Akhil Narang, MD, FASE



Applying guidelines consistently can be challenging, particularly in settings where access to specialized expertise, training, and technology may vary. Panelists explained that, rather than viewing guidelines as static documents, they should serve as the foundation for practical tools

and strategies that support active implementation in multidisciplinary care settings.

After explaining the guideline writing process, participants discussed possible ways to make ASE guidelines easier to integrate into reporting systems and workflows. Ideas included

developing tools to help industry partners prioritize guideline adoption and establishing consistent data formats to simplify integration with laboratory systems. They also considered how AI may shape the future of guidelines, including the potential for more frequent, incremental updates.

Structural Heart Imaging Forum: From Detection to Durable Outcomes

Following the conclusion of the Think Tank, attendees were invited to participate in a special two-hour forum focused on structural heart disease imaging, an area of cardiovascular ultrasound that relies heavily on advanced imaging. The forum was developed with significant input from **Rebecca Hahn, MD, FASE**, whose expertise helped shape the session's discussion and focus. **Dr. Belani** and **Dr. Tierney** served as moderators with discussants **Dr. Asch**, **Dr. Jone**, **Stephen Little, MD, FASE**, **Dr. Mitchell**, **Dr. Puthumana**, and **Ms. Yamat**, to examine the evolving role of imaging across the structural heart patient journey to identify gaps in training and practice.

A severe shortage of trained sonographers and imagers was identified as a primary barrier to the continued growth of structural heart procedures. Potential solutions included strengthening education, mentorship, career pathways, and simulation-based training, particularly for complex skills. Participants also emphasized the need for



(left to right) Megan Yamat, RCS, RDCS, FASE, Kiran Belani, MD, FASE, Seda Tierney, MD, FASE, and ASE Past President Stephen Little, MD, FASE.

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more consistent imaging protocols across institutions to improve quality, maximize resources, and support efficient patient care. The discussion highlighted opportunities for ASE, industry, and other stakeholders to collaborate on educational resources and events, standardized imaging protocols, and innovative training tools to help meet the growing demands of structural heart imaging.

The 2026 IRT Think Tank demonstrated collaboration in action, bringing to life the benefits of ASE's Industry Relations Program: building meaningful connections, sharing knowledge, and collectively shaping the future of the field.

Several themes consistently surfaced throughout the discussions, including strengthening hands-on education, advancing AI implementation, enabling earlier disease detection across the patient journey, making guidelines more actionable, and improving work-

The 2026 IRT Think Tank demonstrated collaboration in action, bringing to life the benefits of ASE's Industry Relations Program: building meaningful connections, sharing knowledge, and collectively shaping the future of the field.

flow integration while addressing sonographer shortages. The energy and passion in the room, along with a shared enthusiasm for cardiovascular ultrasound, provide a strong foundation for continued progress.

Together, we welcomed new partners, highlighted the latest advancements, and addressed challenges. The Think Tank is not simply a meeting to discuss what is new—it is where the cardiovascular ultrasound community comes together to help shape what comes next.



THE 2027 IRT THINK TANK WILL BE HELD MARCH 12-14, 2027, at the Westin Kierland Resort & Spa in Scottsdale, Arizona. Please email [Sam King](#) for more information. See you next year!

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Sono to Sono: *A Personal Perspective*

Contributed by **Norah AlDossary**, Cardiac Technology Specialist,
RCS at King Fahd University Hospital, Alkhobar, Saudi Arabia

I remember back in October 2021 when I was a volunteer, what was written on this board has hit me to the core!

“I promised myself I will do my best for each patient no matter what.”

Our job as cardiac sonographers lies more than just acquiring images, it is to deliver the heart hemodynamics and structural status very meticulously and clearly.

I agree it's not an EASY journey, everyday you will learn something new!

Please, don't take this knowledge for granted.

One of my greatest mentors once said,

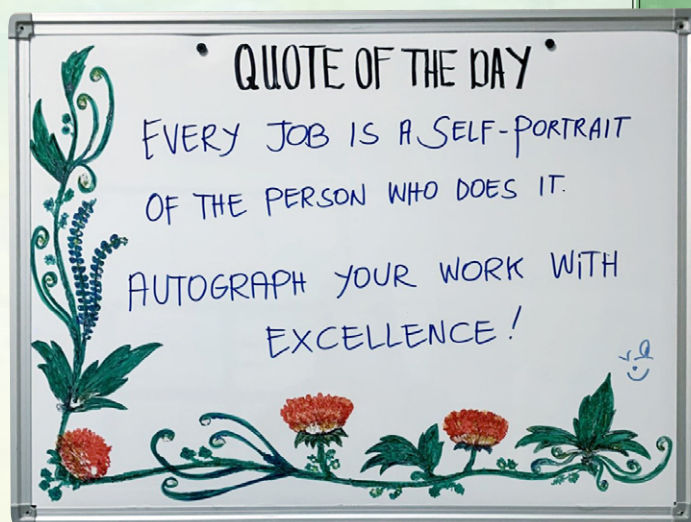
*“When you start imaging the heart,
please take time to get to know it.”
& “As you get to know somebody,
you take your time to know them
as well as the heart.”*

Actually this is what I go by on a daily basis and it's what I make sure my beloved interns go with too.

I'm not perfect nor is anyone else, we all have our own challenges and what makes a sonographer different from a scanner is a fine line of constant improvement.

To my fellow sonographers across the globe, remember:

“Every job is a self-portrait. As you pick up the probe today, ask yourself: what kind of portrait will you leave behind? Autograph your work with the ultimate care your patients deserve. Excellence isn't a destination—it's the way we choose to walk the journey.”



STRENGTHENING THE FUTURE:

The Urgent Need for Educators
in Pediatric Echo Labs



Dawn Park, BS, RDCS, RCCS, FASE, Nationwide Children's Hospital, Columbus, OH, ASE Cardiovascular Sonography Council Steering Committee Member-at-Large; **Lauren Huff, BS, RDCS, RVT**, Edwards Lifesciences, Cincinnati, OH, ASE Pediatric & Congenital Heart Disease Council Member; and **Carolyn Wilhelm, MD, MSc**, Rainbow Babies & Children's Hospital, Cleveland, OH, ASE Pediatric & Congenital Heart Disease Council Member

AT

a time when there is a high demand for onboarding sonographers in pediatric echo labs, an official educator position within a pediatric echocardiography lab

provides significant benefits to both quality and consistency of patient care. With dedicated oversight of training, the educator can ensure standardized scanning techniques, adherence to guidelines, and ongoing competency assessment, all of which directly improve study quality and diagnostic accuracy.

Most graduates enter the workforce with little to no hands-on pediatric experience, and the responsibility for developing competency shifts almost entirely to the hiring institution. The limited availability of pediatric echocardiography training within CAAHEP accredited cardiac sonography programs creates a clear and pressing need for dedicated educators within pediatric echo labs. Without a structured educational framework, this training is often inconsistent, variable between preceptors, and dependent on clinical volume rather than intentional learning.

Educators bring specialized experience in adult learning and clinical instruction, allowing them to more effectively onboard new staff, support sonographers, and develop structured orientation with continuing education programs. An official educator can mentor and train preceptors, many of whom are expert clinicians without formal teaching experience, thereby strengthening the lab's internal teaching capacity and creating a more effective, consistent, and sustainable model for high-quality training. By providing oversight, curriculum development, and competency assessment, the educator not only accelerates skill acquisition but also safeguards quality and patient care, making the role essential in any

lab training sonographers and fellows in pediatric echocardiography.

The Education Committee from Society of Pediatric Echocardiography gathered information from 17 pediatric institutions. This multi-institutional survey highlights both the growing adoption and the persistent fragility of echocardiography educator roles within pediatric laboratories. While a majority of responding institutions (65%) reported the presence of a designated educator, there is substantial variability in role structure, protected time, and institutional support. Institutional echo volume less than 10,000/year was mostly associated with no formal or informal educator role. More importantly, the data reveal a consistent gap between the recognized need for education and the operational realities required to sustain it. Over one-quarter of educator positions exist only as informal or "working" titles, limiting role clarity, accountability, and long-term sustainability. Even among formally recognized positions, protected educational time is frequently compromised, with multiple respondents describing significant erosion of allocated time due to clinical staffing shortages and increasing procedural volumes, in some cases decreasing to less than half of the intended effort. This discrepancy underscores a critical vulnerability: the presence of an educator alone does not ensure an effective or sustainable educational infrastructure.

The broad range of learners supported including fellows, new hires, students, and residents increases educational complexity, a challenge further amplified by the limited availability of formal training pathways. As a result, many laboratories rely heavily on internal training programs to develop competency in this highly specialized field. Staffing constraints emerged as the most significant barrier across both institutions with and without educator roles; laboratories without educators cited difficulty justifying non-clinical FTE, while those with established roles reported being pulled back into clinical service, diminishing their educational effectiveness. This cyclical dynamic suggests that without adequate baseline staffing, educator roles are not only difficult to implement but

inherently unstable. Compounding these challenges is inconsistent administrative and human resources support, with respondents noting difficulty in communicating the value of educator roles to stakeholders outside the echocardiography laboratory. Despite reported improvements in onboarding, imaging quality, and learner outcomes, these benefits are not consistently recognized at the institutional level, contributing to barriers in securing funding, formalizing job descriptions, and establishing appropriate compensation. Collectively, these findings indicate that education in pediatric echocardiography has evolved beyond informal responsibility and now requires dedicated, well supported roles with appropriate training, protected time, and institutional alignment.

Importantly, the data also suggests that institutional experience and scale may influence adoption. Higher volume centers were more likely to report established, formalized educator roles, often with greater protected time and clearer organizational support. These programs may be better positioned to recognize the operational necessity of structured education due to the continuous influx of learners and new hires.

Over one-quarter of educator positions exist only as informal or “working” titles, limiting role clarity, accountability, and long-term sustainability.

However, even among these centers, maintaining protected time remains an ongoing challenge, reinforcing that volume alone does not resolve systemic constraints. The diversity of learners supported, including fellows, new hires, students, and residents further amplifies the need for dedicated educational infrastructure. Educators are not serving a single training pathway but are instead responsible for multiple concurrent



educational demands, each with distinct learning objectives and timelines. This complexity increases the cognitive and operational burden of the role and may contribute to the burnout described by several respondents. In many institutions, this burden is distributed informally across staff sonographers, further emphasizing the need for structured leadership and coordination in education.

Notably, a small number of institutions reported well supported educator models characterized by formal job descriptions, substantial protected time, and strong collaboration with institutional leadership. These programs described fewer barriers and greater overall success, suggesting that when appropriately resourced, educator roles can be both sustainable and impactful. Such models may serve as valuable frameworks for other institutions seeking to develop or strengthen their educational programs.

To be effective, the educator role must be recognized as a formal leadership position within the echocardiography lab, not an informal add-on to clinical duties. It should be a promotion that reflects advanced clinical expertise, strong organizational skills, and the ability to manage multiple responsibilities, including teaching, competency assessment, and program development. Educators must be experienced sonographers with a deep understanding of both pathology and workflow, as well as the ability to adapt instruction to different learners. Given the scope and impact of the role on quality and patient care, transitioning into an educator position should never represent a financial demotion, but rather a promotion that appropriately values the leadership, accountability, and specialized skill set required.

As training demands increase and workforce pipelines become more complex, reliance on informal or under-resourced educational models is unlikely to be sustainable. Establishing standardized expectations for educator roles including defined FTE allocation, protected time, and formal recognition may be essential to ensuring consistency in training and maintaining quality across institutions. Future efforts should focus

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on quantifying the downstream impact of dedicated educator roles on measurable outcomes such as onboarding time, diagnostic quality, staff retention, and learner competency. Such data will be critical in strengthening the case for institutional investment and aligning administrative priorities with clinical and educational needs.

In summary, while pediatric echocardiography laboratories increasingly recognize the importance of formal education roles, significant variability and resource limitations persist. Despite these challenges, the consistent perception of improved onboarding, training, and imaging quality underscores the potential value of dedicated education specialists. Establishing standardized expectations for educator roles, including defined FTE allocation and protected time, will be critical to ensuring sustainable and effective educational programs across institutions. Ultimately, strengthening the future of pediatric echocardiography depends on recognizing that dedicated educators are not optional, but essential to sustaining high quality laboratories, developing the next generation of sonographers, and ensuring consistent, expert patient care in an increasingly complex and demanding healthcare environment.

THE FOLLOWING is a sample list of essential job functions for a Pediatric Echocardiography Educator. Responsibilities may vary by institution and department structure; therefore, not all functions listed below may be applicable or required within every program.

Clinical Excellence

- Maintains advanced knowledge of congenital heart disease, surgical repairs, catheter-based interventions, and imaging techniques to support high-quality diagnostic studies.
- Independently performs and interprets complex echocardiograms across all patient populations with varying levels of congenital heart disease complexity, generates accurate preliminary reports and measurements, and promptly communicates critical findings to attending physicians.
- Demonstrates and maintains proficiency in using all aspects of Electronic Medical Records (EMR) and Picture Archiving and Communication Systems (PACS) relevant to echocardiography functions.
- Adheres to department policies, procedures, and protocols, addressing concerns related to non-compliance or patient and staff safety while maintaining required credentials and certifications.

Education and Staff Development

- Serves as an educational and clinical resource within the echocardiography laboratory, supporting departmental initiatives and advancing staff development.
- Coordinates and delivers echocardiography education and training for sonographers, fellows, physicians, students, advanced practice providers, and new hires.
- Provides mentorship, guidance, and constructive feedback to learners and staff while promoting collaboration, professionalism, accountability, and lifelong learning.
- Assists with onboarding, orientation, and competency development for sonographers, fellows, students, and new hires to support clinical growth and standardization of best practices.
- Contributes to the development and organization of educational curriculum, didactic lectures, case review sessions, simulation activities, and continuing education programs within the echocardiography laboratory.
- Provides hands-on instruction and ongoing educa-

tional support to promote technical proficiency, clinical knowledge, critical thinking, and professional development.

- Develops, organizes, and implements specialized educational programs, such as echocardiography boot camps and focused training initiatives for advanced practice providers and other learners.
- Organizes and coordinates educational shadowing experiences, including visitor onboarding requirements, scheduling, and integration into clinical learning experiences.
- Creates and maintains a structured training program by identifying, developing, and supporting preceptors and training teams who assist with hands-on instruction, onboarding, competency validation, and ongoing staff development, ensuring educational continuity across the laboratory.

Quality, Accreditation, and Research

- Collaborates with leadership and multidisciplinary teams to support quality improvement initiatives, educational goals, accreditation requirements, and standardization of best practices.
- Performs quarterly performance evaluations and quality reviews for submission to accreditation and quality assurance programs, presenting findings at echocardiography quality improvement meetings.
- Coordinates physician overread activities and other quality assurance processes to ensure compliance with accreditation standards and laboratory requirements.
- Supports research initiatives, including protocol review, image quality oversight, core laboratory activities, and collaboration with investigators and research teams.

Leadership and Professional Engagement

- Serves as a valued contributor to leadership discussions, providing expertise and recommendations related to education, quality, clinical operations, and strategic initiatives.
- Models professional engagement through active participation in local, regional, and national educational, scientific, and professional society activities.
- Collaborates with leadership and multidisciplinary stakeholders to identify opportunities for growth, innovation, and continuous improvement in echocardiography education and patient care.

More Than a Degree: Finding Purpose Through Heartbreak

By **Sierra Hendren**

On May 8, 2026, I graduated from Caldwell Community College & Technical Institute's Cardiovascular Sonography Program with honors and a 4.0 GPA. Just days earlier, I stood at my pinning ceremony surrounded by classmates, instructors, family, and friends, celebrating the moment I had worked so hard to reach.

From the outside, it looked like a joyful ending to a difficult academic journey.

What many people did not see was that while I was completing one of the most demanding programs of my life, I was also quietly living through the hardest chapter I could have ever imagined.

I am a mother to two beautiful children — a two-year-old daughter and a nine-year-old son who is globally developmentally delayed. Throughout my education, I balanced motherhood, clinical rotations, exams, sleepless nights, financial hardship, and caregiving responsibilities while trying to remain strong for everyone around me.

Then, only two months into my sonography program, my mother was diagnosed with metastatic breast cancer.

My mother has always been my best friend, my safe place, and one of the greatest sources of love in my life. Watching cancer slowly take pieces of her away while trying to continue school was a pain I do not think words can fully describe. There were days I attended class after crying all night. Days I studied in hospital rooms. Days I questioned whether I could continue at all.



What many people did not see was that while I was completing one of the most demanding programs of my life, I was also quietly living through the hardest chapter I could have ever imagined.

But I did.

Not because I was fearless, but because my mother never allowed me to quit on myself.

As her condition worsened over time, life became a balancing act between school deadlines and medical appointments, between clinical competencies and learning how to help care for someone you love as they slowly lose pieces of themselves to illness.

More recently, we learned that the cancer had spread to her brain.

Around the same time as my graduation and pinning ceremonies, her symptoms began progressing rapidly. On the way to my pinning ceremony, my mother suddenly lost her vision completely. She could not see the ceremony at all. Over the following days, her vision continued going in and out, and her memory and cognition began declining frighteningly fast.

Still, she showed up for me.

Even when she could barely process what was happening around her, she was there.

That alone is something I will carry with me for the rest of my life.

Then, only days after graduation, we took my mother to the emergency room because of drainage from her feeding tube and dangerously low oxygen levels. Around 2:00 a.m., we were told she would be admitted to the hospital. We thought we had time to breathe.

At 3:57 a.m., I received a phone call from the emergency room physician that shattered me completely.

He explained that my mother's lungs were essentially failing her and were no longer able to support her body. He told me I had two choices: allow her to pass naturally, which he said would happen very quickly, or make the decision to place her into a medically induced coma and onto a ventilator, knowing there was a very real possibility she may never wake up again.

No daughter ever imagines having to decide that for her mother.

I made the decision to fight for more time.

That moment changed me forever.

Through all of this, echocardiography has become more than a career path to me. It became a reminder of humanity, resilience, compassion, and connection. I have witnessed firsthand how deeply healthcare providers impact families during the most vulnerable moments of their lives. Some of the smallest acts of kindness from medical professionals became the very things that helped me survive emotionally during these past two years.

My journey through sonography school was never just about earning a degree. It was about building a future for my children while carrying grief, fear, exhaustion, and hope all at the same time.

There were moments I thought I would break under the weight of it all.

Yet somehow, through every setback, every hospital stay,





I think that is what
echocardiography has
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every sleepless night, every financial struggle, and every moment of heartbreak, I kept going.

Not perfectly. Not gracefully. But persistently.

I think that is what echocardiography has taught me most: behind every image, every scan, every diagnosis, there is a human being carrying a story we may never fully know. A family is trying to hold itself together. There is fear, love, grief, hope, and resilience all existing at once.

As I enter this profession, I do so with more empathy than I ever could have imagined before this journey began. My experiences have changed the way I will care for patients forever.

This career came into my life during one of the darkest seasons I have ever faced, yet somehow it also became a light.

To my instructors, a few classmates, healthcare workers, family, friends, and everyone who helped carry me through this chapter: thank you.

And to my mother — thank you for teaching me what true strength looks like. Thank you for everything you have ever done for me and always remember that I love you endlessly.

No matter where this career takes me, your love and your fight will always be part of every patient I care for and every heart I scan.

Editor's note: Sierra submitted this article on May 18, and we were very sad to learn that her mother passed away on June 2.

LEADERSHIP BEYOND CLINICAL EXCELLENCE



*By Christine Pascua-Povey,
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Many sonographers step into leadership roles after years of clinical excellence. They are exceptional educators, trusted colleagues, and highly skilled in patient care and image acquisition. Yet despite being technically outstanding, many quickly realize that leadership requires an entirely different skillset, one that few are formally trained to navigate.

The transition can be both humbling and incredibly challenging. Suddenly, the focus shifts from obtaining high-quality diagnostic images to managing staffing shortages, operational inefficiencies, physician relationships, budgets, quality initiatives, access challenges, workforce development, and long-term strategic planning. Many leaders spend their first years simply trying to keep operations afloat while learning organizational leadership in real time. The experience can feel overwhelming, not because they are incapable, but because operational leadership is a discipline all its own.

Historically, our profession has placed tremendous emphasis on technical competency and clinical excellence while investing far less in leadership development and operational strategy. As a result, many imaging leaders learn through experience. This typically involves trial and error, and a lot of perseverance. While experiential growth remains valuable, modern healthcare operations have become far too complex for leadership development to remain informal.

This matters now more than ever. Workforce shortages across cardiovascular care continue to intensify, with projections suggesting significant shortages in both cardiologists and sonographers over the next decade. At the same time, echocardiography programs are being asked to manage increasing patient volumes, appointment access, support new programs, maintain quality metrics, and improve operational efficiency, all while overseeing increasingly complex



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day-to-day operations.

Meeting these demands requires more than clinical excellence alone. It requires strategy.

Developing operational expertise often begins with intentionally stepping outside of purely clinical responsibilities. Emerging leaders need opportunities and protected time to participate in quality initiatives, workflow redesign, scheduling optimization, accreditation efforts, budgeting discussions, research collaboration, and multidisciplinary committees. Mentorship is equally important and should extend beyond the confines of echocardiography alone. Learning from experienced operational leaders provides invaluable insight into communication, change management, and building sustainable programs.

Meaningful progress in leadership takes time and perseverance. Much of this work is invisible before their impact is fully realized, but they form the foundation of resilient programs.

Strong programs are not built around one exceptional individual carrying the weight of the operation. Far too many labs rely on single points of dependency in leadership, and this vulnerability often becomes evident during periods of transition, growth, or staffing instability. Sustainable programs require shared leadership, operational continuity, and intentional infrastructure that can withstand inevitable change while continuing to evolve.

The development of sonographer career ladders is critical to achieving this. Creating pathways for leadership advancement allows operational expertise, oversight, mentorship, and institutional knowledge to be distributed across teams rather than concentrated within a single individual. Without intentional investment in leadership development, programs risk operating within outdated structures that limit growth, engagement, succession planning, and long-term stability.

Advancing echocardiography leadership also requires strong partnership between sonographer and physician leaders. Medical leadership must advocate for sonographer advancement with the same commitment that technical leaders bring to workforce development initiatives. These efforts cannot succeed unilaterally and are essential to building the next generation of imaging leaders. When physician and sonographer leaders work collaboratively, programs become stronger, more innovative, and more resilient.

As a profession, we must also continue to elevate how echocardiography programs are viewed within health-care systems. Echo labs are not simply diagnostic support services operating quietly in the background. They are foundational to cardiovascular access, longitudinal patient management, procedural planning, inpatient care, and downstream cardiovascular services. Echocardiography itself represents a substantial portion of cardiovascular imaging utilization and healthcare expenditure, underscoring the critical role imaging programs play within institutional operations. Having worked within one of the world's largest multisite pediatric echocardiography programs, performing more than 40,000 studies annually across a regional network, I have seen firsthand how imaging operations influence far more than daily scheduling and study completion. Well-supported echocardiography programs directly impact patient access, physician efficiency, workforce sustainability, institutional growth, quality outcomes, and the overall patient experience.

Yet despite this influence, operational leadership within imaging programs remains frequently underdeveloped, under-resourced, and undervalued.

Organizations such as the American Society of Echocardiography have already taken important steps toward workforce sustainability and leadership development through mentorship initia-



**Emerging leaders
need opportunities
and protected
time to
participate
in quality
initiatives,
workflow
redesign,
scheduling
optimization,
accreditation
efforts, budgeting
discussions,
research
collaboration, and
multidisciplinary
committees.**

tives, specialty interest groups, Women in Echo, Emerging Echo Enthusiasts, leadership engagement opportunities, and collaborative educational programming. Continued investment and expansion in these initiatives will be essential to supporting the future of cardiovascular ultrasound and building sustainable leadership pipelines for the profession.

Leadership is not simply about solving today's operational problems. It is about building systems, cultures, and opportunities that continue to support others long after we are gone.

As leaders, we should challenge ourselves to think beyond our individual accomplishments and consider the legacy we leave behind, not only within our institutions, but within the profession itself. The most impactful leaders are often not remembered for a single study they performed or a single operational problem they solved. They are remembered for building programs that continued to grow, adapt, and support others well into the future.

Clinical excellence will always remain foundational to echocardiography. But if we want our programs and profession to evolve, we must also recognize operational leadership as an essential area of expertise worthy of investment, strategy, mentorship, and intention.

Because ultimately, leadership is not just about the career we build for ourselves. It is about what we leave behind for our peers, our institutions, and the generations that follow.

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