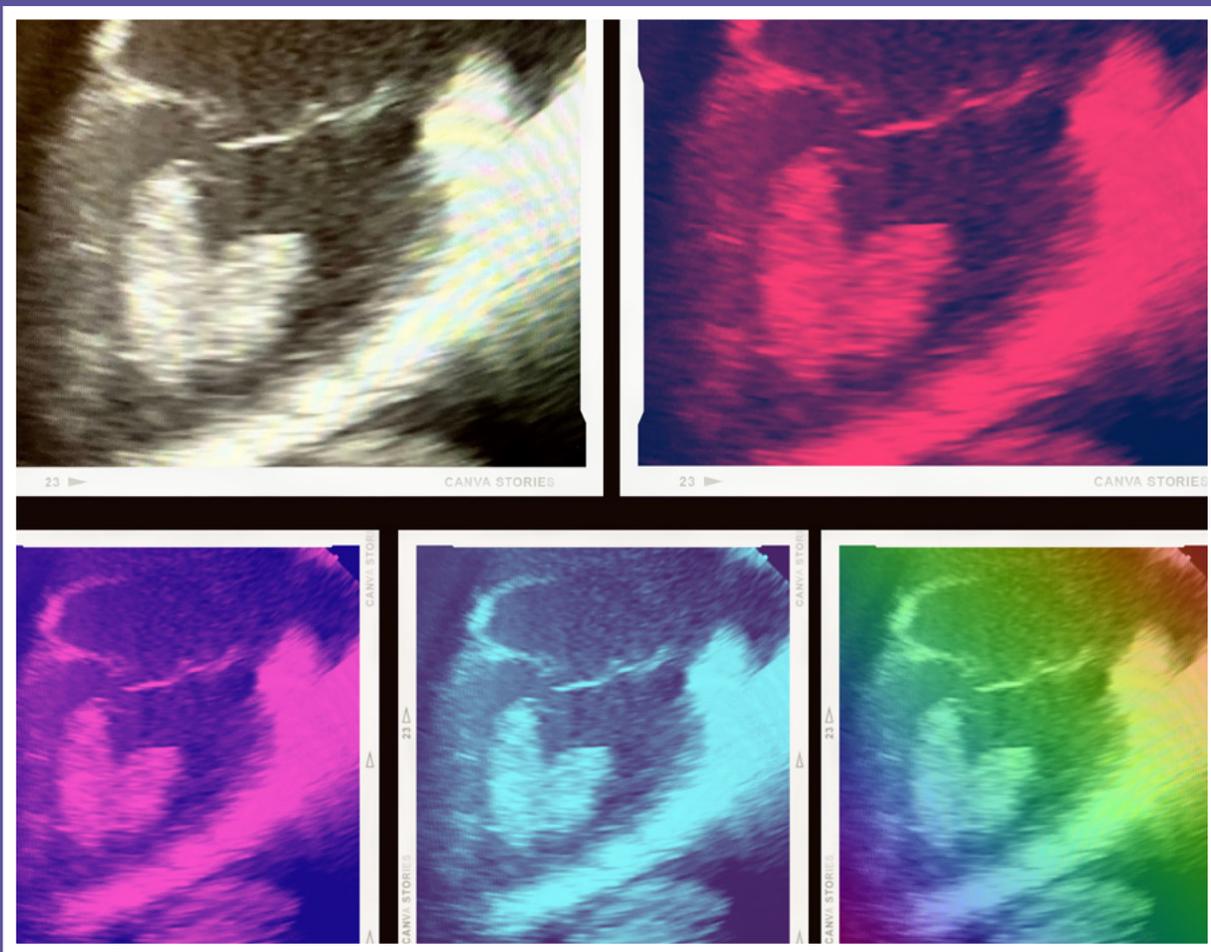


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2023 EDUCATION CALENDAR

FEBRUARY

Structural Heart Intervention and Imaging 2023: A Practical Approach

February 1-3, 2023

Hyatt Regency La Jolla at Aventine
San Diego, CA

Provided by Scripps Health and in cooperation with ASE

Valve Disease, Structural Interventions, and Diastology Summit

February 2-5, 2023

Eden Roc Miami Beach
Miami, FL

Provided by Cleveland Clinic Educational Foundation and in cooperation with ASE

35th Annual State-of-the-Art Echocardiography

February 17-20, 2023

Westin Kierland Resort & Spa
Scottsdale, AZ

Jointly provided by ASE and the ASE Foundation

MAY

24th Annual ASCeXAM/ReASCE Review Course | VIRTUAL

Content Available May 8, 2023

Jointly provided by ASE and the ASE Foundation

Discounted rates for ASE members. To learn more and register, visit us at ASEcho.org/Education.

JUNE

34th Annual Scientific Sessions

June 23-26, 2023

Gaylord National Resort &
Convention Center
National Harbor, MD

Jointly provided by ASE and the ASE Foundation

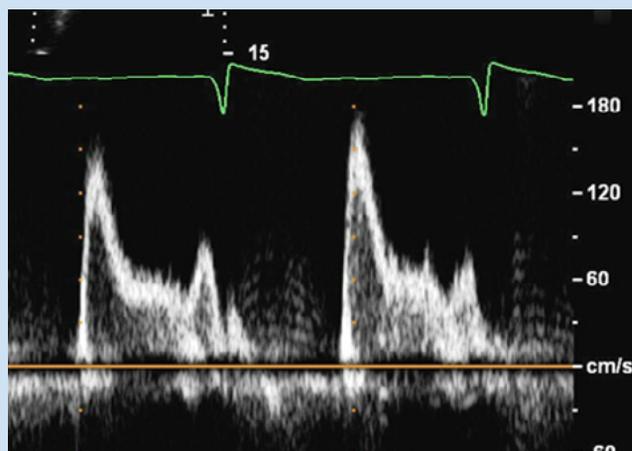
OCTOBER

11th Annual Echo Florida

October 7-9, 2023

Disney's Yacht & Beach Club Resort
Orlando, FL

Jointly provided by ASE and the ASE Foundation



This text also appears in the February JASE.
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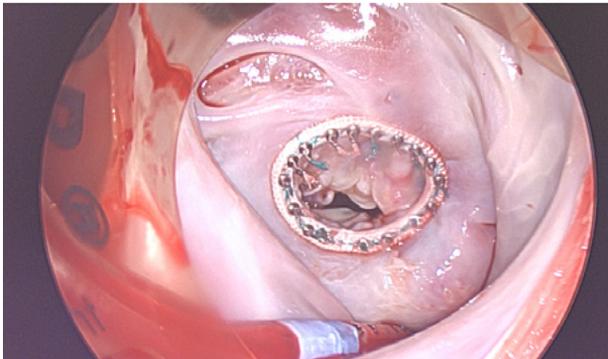
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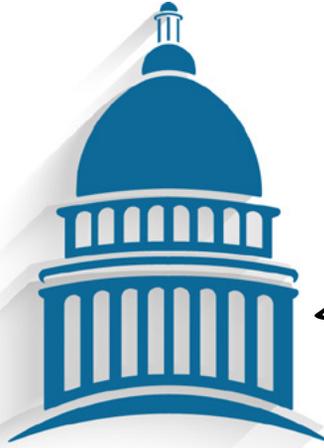
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2023 ASEF Council Travel Grant Applications NOW OPEN!

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Cover art: Cover art: "RV^2" Angelica Valentin, RCS, Advocate Illinois Masonic Medical Center, Chicago, Illinois

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.

THE ASEF: “TOGETHER, WE CAN MAKE A WORLD OF DIFFERENCE!”

*Contributed by **James N. Kirkpatrick, MD, FASE**, Chief of the Section of Cardiovascular Imaging and Director of Echocardiography in the Division of Cardiology and Professor of Medicine, University of Washington School of Medicine, and chair of the ASE Foundation and chair of the 2023 ASE Scientific Sessions and **Stephen H. Little, MD, FASE**, Cardiology Fellowship Program Director at Houston Methodist Hospital, System Director for Structural Heart, Professor of Medicine, Weill Cornell Medical College, Cornell University, and Adjunct Professor at Rice University in the Department of Bioengineering*

“

Our next ASEF event will take place in 2023 in the Sapa region of northeastern Vietnam and will involve a research project, training of physician and non-physician sonographers, and lectures and hands-on training.”

Hopefully the catchphrase in this title is at least somewhat familiar. It encapsulates the mission of the ASE Foundation (ASEF), which aims to be “the driving force for improving health for all through the use of cardiovascular ultrasound.”

The ASEF’s specific goals seek to improve the quality and efficiency of healthcare delivery through innovative research, to provide better access to healthcare workers worldwide for the improvement of cardiovascular health standards, and to ensure that the foundation is recognized as a key force in improving cardiovascular health and access to ultrasound worldwide.

The ASEF is ASE’s charitable arm, not funded by ASE membership dues but rather relying exclusively on donations. The ASEF is governed by a separate board with fundraising by an Annual Appeal Committee. The ASEF’s primary areas of focus are Global Health Outreach, Research, Patient Engagement, and Travel Grants and Scholarships. Global Health Outreach encompasses outreach events, which have taken place in nine different countries and involve a combination of clinical work, education/training, and research. During the COVID hiatus, ASEF global outreach continued in the form of participation in several virtual congresses in

Asia, during which ASE volunteers provided lectures and participated in a virtual echocardiographic “Training Village.” Opportunities to participate in global health outreach events are facilitated by the David



James N. Kirkpatrick, MD, FASE

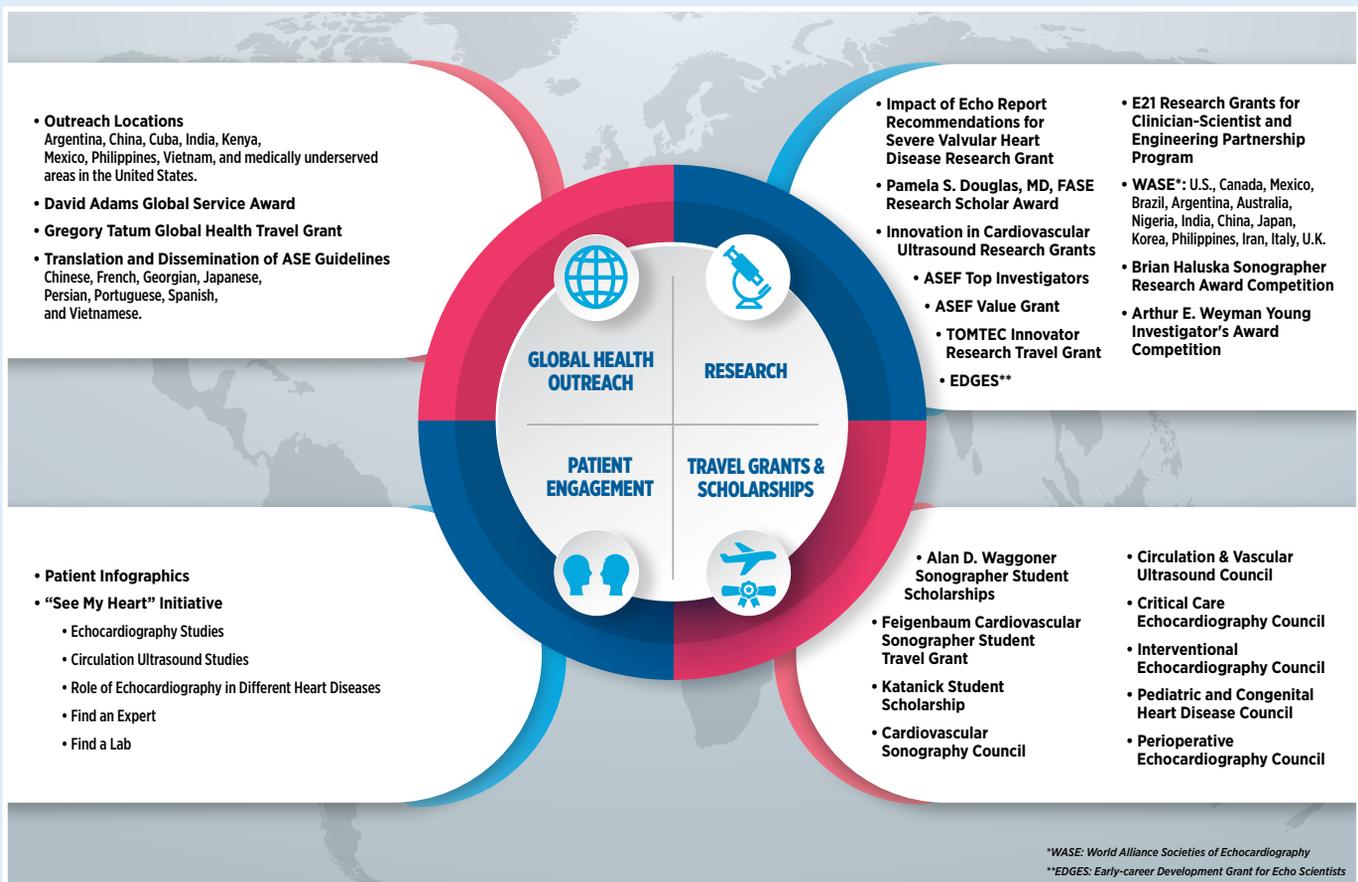


Figure 1.

Adams Global Service award that provides a travel scholarship to a first-time sonographer volunteer participating in such events.

Our next ASEF event will take place in 2023 in the Sapa region of northeastern Vietnam and will involve a research project, training of physician and non-physician sonographers, and lectures and hands-on training at the Vietnam National Heart Institute in Hanoi. This outreach event will be dedicated to the memory of Gregory H. Tatum, MD, FASE who, tragically, died last November. Greg was a pediatric echocardiographer who led ASEF outreaches to Kenya and participated in outreaches to Vietnam, as well as global health events sponsored by other organizations. ASEF established the Gregory Tatum Global Health Travel Grant Endowment, funded by donations made in his memory. Starting in 2023, this endowment will be used to fund a long-term series of travel grants for volunteers participating in global health activities, allowing many ASE professionals the opportunity to follow in Greg's footsteps.

In conjunction with global health outreach events, the ASEF funds translation and dissemination of ASE guidelines, with many now available in multiple languages.

We continue to look ahead to translating our high impact guidelines and standards into many more languages.

Research funding has been a major focus of the ASEF since its inception. ASEF provides funding for promising researchers and their projects and creates opportunities for researchers to interact with global experts in cardiovascular ultrasound - building relationships that lead to future collaborations. ASEF administers funds for multiple large projects (Figure 1) and has participated in funding the World Alliance Societies of Echocardiography (WASE) Normal Values

“ASEF provides funding for promising researchers and their projects and creates opportunities for researchers to interact with global experts in cardiovascular ultrasound”

Study, an international collaboration across six continents that has already generated 16 publications (and counting) and continues to address important research questions. The ASE and ASEF are currently working on a restructure of the research granting process to streamline and facilitate the funding of high quality, high value projects that will advance the field of cardiovascular ultrasound, particularly in funding early career research (be on the lookout for announcement of the “EDGES” program!).

In addition, the ASEF will continue to fund the Top Investigator Travel Grant, the Arthur E. Weyman Young Investigator’s Award Competition, the Brian Haluska Sonographer Research Award Competition, and the TomTec Innovator Research Travel Grant, all of which enable promising researchers to showcase their work at the ASE Scientific Sessions and other meetings. The ASEF recognizes the importance of patient engagement and has produced infographics explaining the role of echocardiography in assessment of diastolic dysfunction and cardio-toxicity from chemotherapy. In addition, through the ASE/ASEF’s “See My Heart” initiative, patients can get answers to questions about all forms of echocardiography, circulation ultrasound, and the role of echocardiography in different heart diseases.

In addition to research travel grants, the ASE funds a variety of other scholarships and travel grants. (*Figure 1*). These awards support training and educational conference participation. In addition, each of the ASE’s Councils choose travel grant recipients to facilitate participation in the ASE Scientific Sessions. By fostering the next generation of cardiovascular ultrasound professionals, the ASEF is ensuring that echocardiography continues to play a prominent role in the future of healthcare.

Throughout the year, the ASEF Annual Appeal Committee undertakes multiple campaigns to fund these important endeavors. This spring, the Annual Appeal Committee will host a donation competition between participating ASE council steering committees

and special interest groups. We will see which group lands the prize for the most funds raised! In addition, the Annual Appeal Committee has been hard at work planning activities during ASE 2023 in National Harbor, MD and the 14th Annual Research Awards Gala (this year’s theme is “All the Colors of the World”).

As a stated goal, the ASEF aims to ensure that the foundation is recognized as a key force in improving cardiovascular health and access to ultrasound worldwide. As a professional organization, all ASE members should be very proud of the work and impact of our philanthropic arm – the ASE Foundation.

“As a stated goal, the ASEF aims to ensure that the foundation is recognized as a key force in improving cardiovascular health and access to ultrasound worldwide.”

Stephen H. Little,
MD, FASE
ASE President



This text also appears in the February JASE. OnlineJASE.com

The Advanced Cardiac Sonographer – Advice from the Experts

Contributed by **Ken Horton, ACS, RCS, FASE**, Intermountain Health
and **Allyson Boyle, MHA, ACS, RDCS, FASE**, Atrium Health



WITH THE CURRENT advances in technology and the expansion to structural heart interventions over the past decade, the role of the sonographer has drastically changed. Sonographers today are being asked to perform more comprehensive and complex echocardiograms than ever before. These advances have led to the need for sonographers with an advanced level of knowledge and skills in performing and interpreting complex echocardiograms. The Advanced Cardiac Sonographer (ACS) career pathway was first described in a white paper published in the *Journal of the American Society of Echocardiography* in 2009.¹ Subsequently, a credential was

developed by Cardiovascular Credentialing International² with the first examinations being administered in 2015.

There are currently two accredited ACS programs in the United States and many facilities have created a specific job description for an Advanced Cardiac Sonographer. The intent of this article is to describe the experience of creating an Advanced Cardiac Sonographer educational program and creating a specific Advanced Cardiac Sonographer

job description. We interviewed two ACS Program Directors that created their ACS programs and two managers that developed ACS specific job descriptions. In the article they share their experience and provide you with the steps they took.

Sonographers today are being asked to perform more comprehensive and complex echocardiograms than ever before.

How to Start an ACS Program

There are currently two programmatically accredited ACS Programs. Merri Bremer Ed. R.N., ACS, RDCS, FASE, is the Program Director for the ACS Program at the Mayo Clinic in Rochester, Minnesota. Joy Guthrie PhD., ACS, RDMS, RDCS, RVT, is the Program Director for the ACS Program at the Community Regional Medical Center Hospital in Fresno, California. Below, they share their experiences in starting the first two ACS programs in the country.



Merri Bremer

Ed.D., R.N., ACS, RDCS, FASE
ACS Program Director
Mayo Clinic
Rochester, MN



Joy Guthrie

PhD, ACS, RDMS, RDCS,
RVT, FASE
ACS Program Director
Community Regional
Medical Center
Fresno, CA

Q. Can you briefly outline the steps to starting an ACS program, and what advice would you give to Program Directors that are contemplating starting an ACS Program?

Merri:

- Review the program proposal process at your institution (if there is one). If you are hospital-based, consider creating an SBAR (Situation, Background, Assessment, Proposal) to submit to the appropriate administrative/clinical personnel. This should include a brief executive summary of the proposed program. Include the necessary background, justification for the program, and the benefits. Detail the impact the program will have on the department/division.
- Gather representative stakeholders for input and support. These may include the clinical department, admin, sonographers, supervisors, student candidates, etc. Letters of support are critical.
- Perform a financial effect analysis.
- Review the ACS CAAHEP Standards and build your program and curriculum according to them.

- Consider your candidates – working sonographers will require a different program structure than entry-level students (part-time, asynchronous, online).
- Seek CAAHEP accreditation early – graduates of an accredited program can take the ACS boards with only three years of sonography experience.
- Consider building your program on already existing infrastructure (i.e., entry-level sonography program).

Joy:

- The first step would be to go to the CAAHEP website and download the Standards and Guidelines for Advanced Cardiovascular Sonography Programs. This will provide the framework for the curriculum, faculty requirements, and student admission requirements.
- There is a toolkit for Program Directors available on the CoA-ACS website to use as a guideline to start a program as well as sample ACS job descriptions.
- On the CoA-ACS website there is also a recording of a webinar related to starting an ACS program.
- Obtain administrative buy-in to add on an additional learning concentration to your already established Adult Cardiac Program.
- Provide an open forum in your region including all stakeholders to determine need and acceptance of graduates in your region for advanced placement in the facilities. This would include hospital administrators, cardiologists, department managers, IT specialists, cardiac sonographers, etc.
- Reach out to CoA-ACS for assistance along the way to follow the established successful pathway.

Q. How often does your program convene a new class and, on average, how many people apply for your program and how many are selected?

Merri: We start a new cohort every August and can take up to 8 students per cohort.

Joy: We start a new cohort every two years. We have from 8-12 apply each class and accept 5-8 students per cohort.

Q. How do you prepare your ACS students to serve in a role that they would be training other staff, fellows, or physicians?

Merri: The curriculum includes an education course, but all ACS students work with entry-level students, sonographer orientees and fellows during their

clinical rotations. ACS students are required to give feedback to these learners and demonstrate/facilitate techniques as appropriate.

Joy: The ACS students are required to review and write down the results of 150 echocardiograms for protocol and 150 pathology cases. This aligns with the exact number as our UCSF Cardiac Fellow training. The didactic curriculum following the ACS Standards and Guidelines including the following topics: IAC preparedness, Physics, Hemodynamics, IRB and Clinical Trials, Research and Biostatistics, Correlative imaging, Advanced Echo Techniques, Sterile Technique, Med/Surg treatment of CV disease, CV Pharmacology, Healthcare Budgeting and Financial Management, Image Critique and Analysis, and Congenital Cardiovascular Disease. There is also a course in Instructional Methods including various learning theories and teaching techniques.

Q. Describe what hands-on experience (scanning labs, clinical rotations, etc.) students in your program receive during their education.

Merri: ACS students typically spend some time completing scanning skills competencies (strain, quantitation, 3D, etc.) as part of their clinical rotations. Each student is required to be on campus for eight days per semester (32 days total over 16 months). When not actively scanning, students are reviewing studies of staff sonographers, obtaining additional images/data, and creating preliminary reports.

Joy: The students have three separate (one week each) on-site clinical residencies. Scan labs are included at each residency including 3D, Strain, Fetal Echo Phantom, and Interpretive sessions with our Medical Director. Their clinical rotations include Cath lab, CT, MRI, Nuclear-Med, Adult Congenital Clinic, Ped Echo, and Fetal Echo.

Q. What percentage of graduates from ACS programs are employed at facilities that hire dedicated Advanced Cardiac Sonographers?

Merri: Many of my students have been Mayo Clinic sonographers and continue on in a formal ACS role in our system. 20 graduates so far/16 are in an ACS role.

Joy: The percentage of our ACS graduates employed at facilities that have official job descriptions as

Advanced Practice Sonographer or Advanced Cardiac Sonographers is 43% as our students come from across the nation. To date, ALL graduates have gotten hired into a higher status at their respective facilities, however, not all the graduates have been designated as an Advanced Cardiac Sonographer in their job description. For example, in the regional hospital that employs the majority of the ACS graduates, after passing the ACS exam they were immediately elevated to the highest status (Sonographer III) with a higher compensation and status.

Creating a Specific ACS Position in Your Echo Lab

The success and growth of the Advanced Cardiac Sonographer field is dependent on hospitals creating positions specific to advanced cardiac sonography. Elizabeth McIlwain ACS, RCS, FASE, is the Clinical Director, Procedural & Outpatient Services at LCMC Health's West Jefferson Medical Center in Marrero, Louisiana. Monet Strachen ACS, RDCS, FASE, is the Director of Echocardiography Programs at the University of California, San Francisco, California. Monet has created ACS positions at two hospitals (UCSF & UCSD). In the section below, they share their experience and recommendations for creating an Advanced Cardiac Sonographer position.



Elizabeth McIlwain
ACS, RCS, FASE
Clinical Director, Procedural & Outpatient Services
West Jefferson Medical Center
LCMC Health
Marrero, LA



G. Monet Strachan
ACS, RDCS, FASE
Director of Echo Programs
University of California -
San Francisco
San Francisco, CA

Q. What were the steps you used to create an ACS specific job position? How long did it take and how much "resistance" was there? What advice would you give to other managers that want to create a dedicated ACS position?

Elizabeth:

STEPS:

- 1) *Recognized the need*
- 2) *Identified sonographer, physician, and administrative champions*
- 3) *Researched ACS positions, job descriptions, literature*
- 4) *Developed a job description*
- 5) *Performed a cost/benefit analysis*
- 6) *Submitted the proposal for approval*

It took us about a year to navigate the entire process. Having champions was very helpful. Different perspectives (sonographer, physician, executive) are needed to identify issues as you work thru the approval and implementation process. Once you recognize the need or desire for an ACS in your lab work to identify how this job is different from other sonographer positions. What is it about the ACS that is a benefit to your specific lab? Because the ACS role is still relatively new, labs are still navigating what it is. In some labs, the ACS is the person who helps put together the preliminary findings. In other labs the ACS is a sonographer who is involved in TEE, Stress Echo, structural heart procedures, and/or specialized studies (STRAIN, 3D, structural heart work-up/follow-up). Key to successfully implementing an ACS into your lab is defining what this role is and how it is different (beyond simply holding the ACS credential) from other sonographer positions in the lab. Don't give up!

Monet: In San Diego, when I created the ACS role, it was in response to the elimination of a lab supervisor during a budget shortfall. I was being promoted to manager and the organization decided to not backfill the supervisor position I vacated. As a result, there was a significant gap in supporting daily operations, and our ACS lead sonographer role was created out of necessity. The job class utilized was a level 4 sonographer and because the role was mostly clinical making this a union position. Now, in San Francisco, I have created a clinical educator role to run our echo program and to help support the sonography team. This role will require the individual has or achieves their ACS within 6 months of hire. Since this role is focused on education and teaching rather than patient facing, it was decidedly less clinical and therefore a non-union role and is posted in a manager job class. The advice I would give to others trying to create a dedicated ACS position, is to not give up. Show up prepared to present your case to

leadership outlining the need, how the role will benefit the department and organization and financial impact. Even if you fail to secure the position and role the first time, listen to the concerns and consider what modification may be needed to solidify support.

Q. **Are there any incentives in your lab that would entice sonographers to get the ACS credential? Is there a pay grade difference? Do you actively encourage sonographers to get the ACS credential and financially support them taking the examination?**

Elizabeth: The ACS credential is required for the ACS job description so for sonographers desiring to work in this capacity that is the first step. There is a 1 pay level difference between the Cardiac Sonographer job descriptions and the ACS job description. Obtaining the ACS credential is considered an additional credential. In our job classifications, having a 2nd cardiac credential automatically moves a sonographer from a Cardiac Sonographer 1 to a Cardiac Sonographer 2. As a director I do encourage all of my sonographers to obtain an advanced cardiac sonography credential (ACS, RCCS, and/or RDCCS-PE). That conversation is always a part of their annual performance reviews. The department owns review/study material for the advanced exams and makes it available to all sonographers. Through our hospital foundation we have established a process to provide a set amount of money for a review course and/or review material. Once the sonographer takes and passes the exam this funding source also reimburses the cost of the exam.

Monet: There are no immediate incentives in our lab for holding the ACS credential. Having this additional advanced credential makes them eligible to apply for level 3 sonographer or any open ACS positions. There are additional responsibilities at each level, and therefore the sonographer would have to be interested in assuming these additional responsibilities in their daily work. I actively encourage professional growth and support achieving ACS status when discussing opportunities for growth with my sonography team. It is against our organizational policy to pay for credentials or licenses, however there is a 6% pay increase between level 2 and level 3 sonographers.

Q. How many sonographers in your lab hold the ACS credential? How many are in positions that were created specifically for an ACS? What is the ACS: RCS/RDCS ratio in your lab?

Elizabeth: There are currently three sonographers holding the ACS credential (two are full-time sonographers and the 3rd is myself). We have requested two ACS positions. ACS positions to RCS/RDCS positions will be 1:3 once everything is in place. This is probably high for a lab our size but it met a need so that is where we opted to start.

Monet: In San Diego we had five sonographers with ACS credentials and our ratio was 1:6. At the time I left, there were three ACS specific positions with one more in the works. In San Francisco, we currently have one ACS with three others working towards adding this credential and one sonographer that has it currently in recruitment.

Q. How do you utilize the ACS in your lab? What are some of the major roles and responsibilities for the ACS in your laboratory?

Elizabeth: In our lab the ACS is (will be) primarily utilized in two ways. One will be responsible for education, quality, and new process implementation. The other will primarily handle the advanced procedures - specific strain protocols, structural heart work-up/follow up. Both will be considered resources in the lab for other sonographers, students, and physicians.

Monet: In San Diego, they were the first point of contact for any clinical questions from the sonography team and cardiology fellows. They supported training and monitoring of any new hires during their onboarding. They provided feedback to leadership for annual reviews. In addition, they were the point of contact for inpatient teams and first line approver for same day urgent add on studies. In our pediatric department, the ACS cross trained and supported adult sonographers to learn pediatric and ACHD studies. In San Francisco, I have not been able to create the ACS-lead role but have a dedicated educator role in recruitment. This individual's responsibilities will include being the clinical coordinator of our sonography school, clinical educator for the team as well as manage our QA program.

Q What are the benefits of having dedicated ACS(s) in your lab?

Elizabeth:

- Opportunity for sonographer growth and career development
- Resource for other sonographers, students, physicians
- Improved quality, accuracy, and completeness of echocardiograms
- Specific to our lab (community hospital, non-academic) - It is often a sonographer who drives the implementation of updated guidelines, new protocols, new technology, etc. This sonographer is one who is dedicated to their profession and desires to always provide the best possible care to their patients. The ACS role is a sonographer who has these characteristics and will work to keep our lab up to date on the care we provide to our patients.

Monet: The benefit of having a dedicated ACS is numerous for both the organization and the individual. As a leader, having this resource for the team as a go to removes obstacles to providing timely high-quality care. It also gives the team an additional resource for information or assistance. On an individual level, it gives team members a role to strive for and professional growth opportunities.

The field of Advanced Cardiac Sonography is now a reality. There are currently 334 credentialed Advanced Cardiac Sonographers, and the field is growing. To sustain that growth, we will need to establish more ACS training programs, create more positions specific to the ACS and encourage our colleagues to take the ACS exam. There are multiple resources available to assist you with all of those. Information about beginning an ACS program and examples of ACS specific job descriptions can be found on the Commission on Accreditation of Allied Health Education Programs ACS website.³ If you have questions about applying for the ACS examination visit the Cardiovascular Credentialing International ACS examination website.² Also, any of the contributors to this article would be glad to share more information or experiences.

References

1. Mitchell, C., Miller, F., Bierig, M., et al 2009, Advanced Cardiac Sonographer: A Proposal of the American Society of Echocardiography Advanced Practice Sonographer Task Force. Journal of the American Society of Echocardiography. Vol 22, Issue 12, Pages 1409-1413
2. Website: Cardiovascular Credentialing International; cci-online.org
3. Website: Commission on Accreditation of Allied Health Education Programs, Advanced Cardiac Sonography

Sonographer VOLUNTEER OF THE MONTH- FEBRUARY

Congratulations

Patrice McKay, RDCS, FASE

Delray Medical Center,
Delray Beach, FL



Why do you volunteer for ASE?

I have always had a strong sense of responsibility and an altruistic nature. So naturally, after experiencing the enrichment through ASE, I was excited to be able to have the opportunity to contribute and do what I love and help in the process. There is this quote “No person has ever been honored for what he receives, always, for what he has given.” I volunteer with ASE because it allows me the opportunity to give back impacting others and paving the way for those coming after me. In the words of Madhav Swaminathan, MD, past President of the ASE, “*we must be those shoulders on which others find it easy to stand on.*”

What is your current role within ASE? In the past, on what other committees, councils, or taskforces have you served and what have you done with the local echo society?

I am very grateful to be able to serve as Member at large on the Cardiovascular Sonography Council Steering Committee and sonographer representative on the Membership Committee.

When and how did you get involved with cardiovascular ultrasound?

I joined the American Society of Echocardiography back in 2013, I had a desire to broaden my horizons, optimize my potential and increase my knowledge all while satisfying my CME requirements, and I came across ASE and was intrigued. I was pleased with what ASE offered, and I felt it fulfilled all the desires I had and became my one-stop Echo shop. I have been committed ever since.

What is the name and type of facility/institution at which you work, and what is your current position?

I am currently working at Delray Medical Center in Delray Beach, Florida. I am a staff sonographer, and I dabble in various areas, Structural Heart, routine imaging, and research and resource person when necessary and provide any assistance to the team whenever the need arises.

When and how did you get involved with ASE?

My passion was fueled as I grew as an ASE member and seeing all that my fellow sonographers were doing through ASE, and I wanted to be involved. I remember seeing ASE advertise for volunteers for different missions, and I read other volunteer stories and wanted to be included. I answered the mission call from the charitable arm of the ASE for a trip to West Virginia in 2018 and was selected among many other wonderful sonographers.

“

I volunteer with ASE because it allows me the opportunity to give back impacting others and paving the way for those coming after me.

”

In my local arena, while we do not have an active local society, I strive to lead by example and inspire others to excellence, from my little corner in the echo world.

As I interact daily with new sonography students and cardiology fellows, I always take every opportunity to infuse my love and passion for the field. Encouraging them to autograph the work they do with excellence setting them up for success in the field. I never miss an opportunity to highlight ASE and the wonderful benefits that make this organization so wonderful, so much so, I have earned the nickname “walking billboard for ASE.”

What is your advice for members who want to become more involved in their profession or with ASE?

I would advise other members to step out of their comfort zone and reach out and make a friend/ connection. Be willing to invest in your professional development. I remember taking the leap and funding my entire trip to ASE out of pocket. It was the best professional investment I made. I met many other likeminded professionals and gained experience and boost in my motivation and confidence. I was subsequently chosen from a pool of volunteers to participate in the ASEF Volunteer Mission in Morgantown, West Virginia.

I made a friend and she introduced me to another friend and they both encouraged me and I applied to various councils. ASE is committed to our professional advancement in the field and helping us develop and become leaders of the future.

What is your vision for the future of cardiovascular sonography?

In my opinion, echocardiography is such a unique modality available to our community, and I have come to expect growth and advancement in the field of cardiovascular sonography. So, I anticipate being amazed by the great medical minds. When I think of the future of cardiovascular sonography, I hope to see continued excellence in imaging and of standards of practice, that more institutions will value the work we do in echocardiography and make provision to facilitate more professional development/advancement within the work place, and see more passion for the profession and a drive for personal professional excellence tapping into all the wonderful resources available to us as sonographers, from ASE and other industry leaders.

When I think of the future of cardiovascular sonography, I hope to see continued excellence in imaging and of standards of practice, that more institutions will value the work we do.

Intra-Operative Transesophageal Echocardiography in the Operating Room: Pearls and Pitfalls

Contributed by **Rafael Arias, MD, Eric Sarin, MD, and Qiong Zhao, MD, PhD**, Inova Heart and Vascular Institute, Inova Fairfax Hospital



To assist with surgical decision-making and to ensure optimal patient care, it is important that the echocardiographer and the surgical team function as one team.

INTROOPERATIVE TRANSESOPHAGEAL echocardiography (TEE) is a well-established imaging modality and a cornerstone to assist with surgical decision-making in the operating room (OR). To assist with surgical decision-making and to ensure optimal patient care, it is important that the echocardiographer and the surgical team function as one team, with clear communication between them. Key benefits of intraoperative TEE are that it provides real-time information in confirming the pre-operative diagnosis, evaluates for interval changes, and guides various surgical and hemodynamic interventions.¹ Intraoperatively, once the cardiac pathology at hand has been repaired or otherwise addressed, TEE can immediately assess the adequacy of a repair or replacement and may help to determine whether further surgical interventions are indicated.¹ Intraoperative TEE may also be utilized for patients undergoing both high-risk non-cardiac and those with sudden hemodynamic changes (e.g., rescue TEE).

Pre-operative assessment of the grading of mitral regurgitation (MR) should ideally be done under more physiologic conditions while the patient is closer to the awake state.² This is best performed by transthoracic echocardiography (TTE) or with TEE with an adequately but lightly sedated patient. In the OR, because of the effects of general anesthesia on pre-load, afterload, and mitral valve (MV) closing forces, it is imperative that assessment of MR via intraoperative TEE be performed under similar loading conditions to a patient's normal physiologic state.² Nevertheless, the quality of images provided by intraoperative TEE is ideal for characterizing the MV apparatus and any MV pathology including the specific mechanism of MR.

In the case of rheumatic MR, while in the operating room, the surgeon visually inspects the valve and utilizes the information obtained from intraoperative TEE to better understand if a repair of the MV is feasible or not. Ultimately, it will be up to the surgeon whether a replacement is necessary, especially in cases of advanced rheumatic MV disease. If a repair is being pursued, intraoperative TEE is essential in gauging the adequacy of repair and the absence of any complications (e.g., introduction of mitral stenosis, systolic anterior

motion of the anterior MV leaflet etc.) However, if more than trivial MR is being visualized by TEE post repair, then the surgeon will likely be prompted to attempt a revision of the initial repair.² If instead the surgeon chooses to replace the MV with a prosthesis, intraoperative TEE is useful for determining (1) adequate functioning of the mechanical disks or bioprosthetic leaflets, (2) the presence of intra- or para-valvular pathological regurgitation, and absence of any paravalvular leak (PVL) and (3) comprehensive examination of LV function.

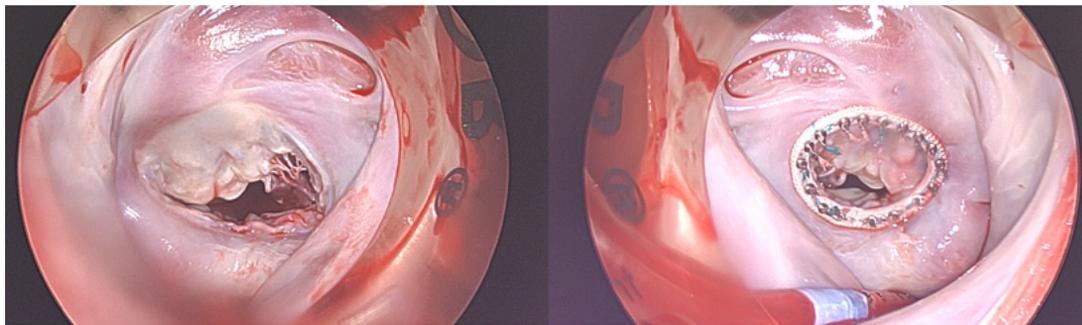
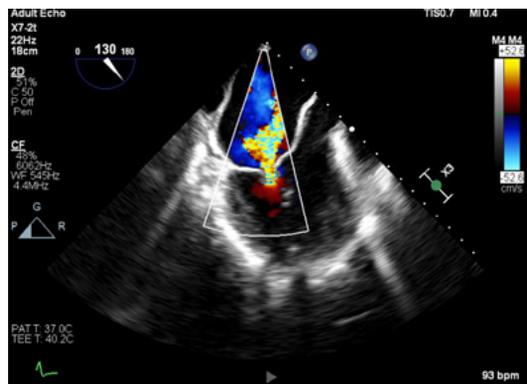
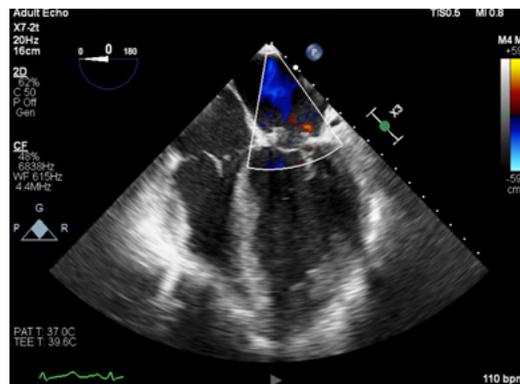


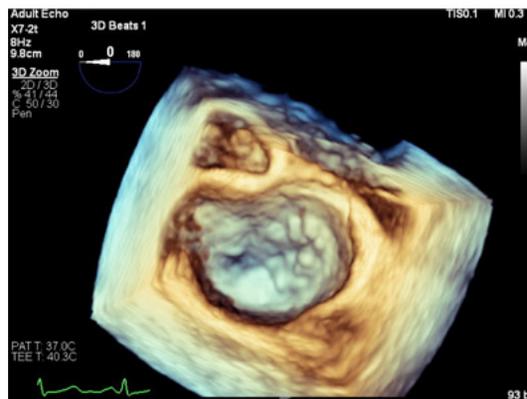
FIGURE 1
Patient with functional mitral regurgitation. Shown are images pre- and post- mitral valve repair with a 26 mm semi-rigid ring. (Photos courtesy of Dr. Eric Sarin.)



PANEL A



PANEL B



PANEL C

FIGURE 2

Intraoperative TEE images of the patient in Figure 1. **Panel A** shows a 3-chamber view demonstrating severe mitral regurgitation prior to repair. **Panel B** shows a 4-chamber view demonstrating no residual mitral regurgitation after repair with a semi-rigid ring. **Panel C** shows a 3D image from the surgeon's view prior to repair demonstrating functional mitral regurgitation due to annular dilatation and tethering of the P3 segment of the valve.

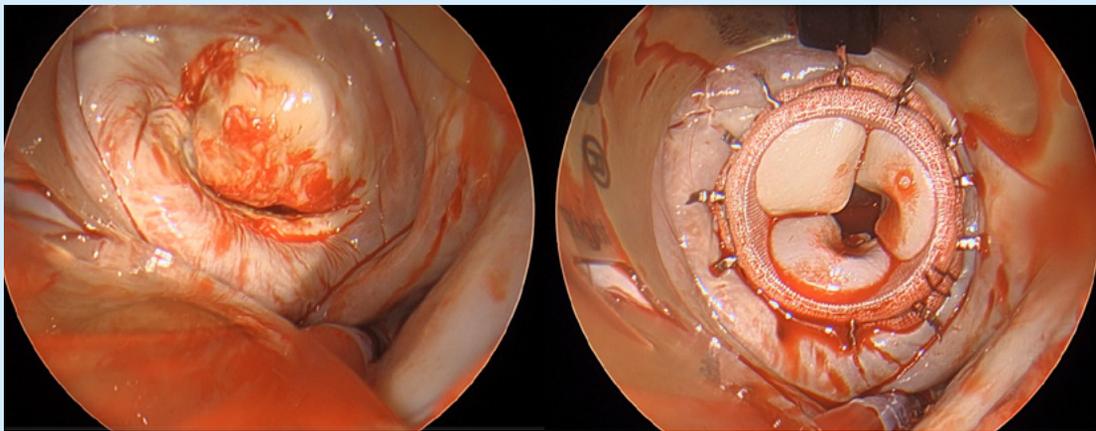
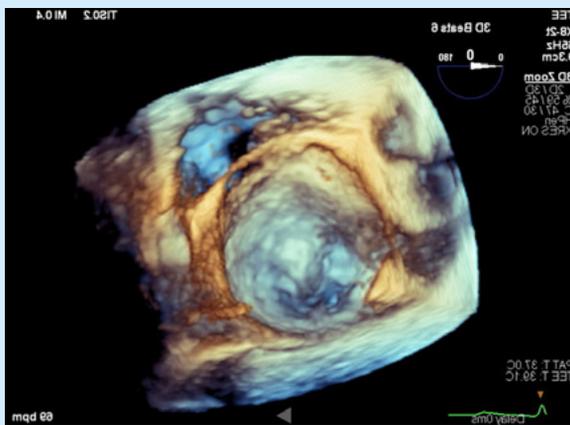
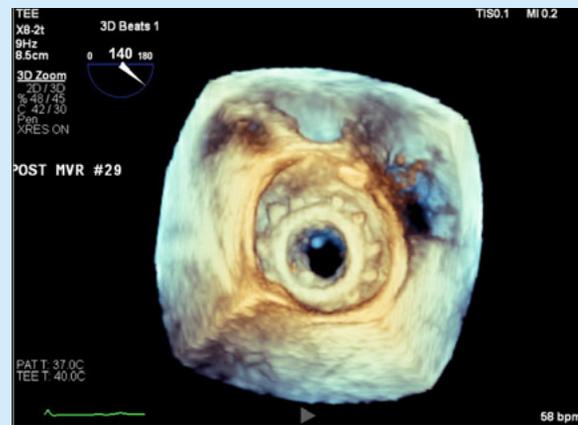


FIGURE 3

Patient with rheumatic mitral valve disease. Shown are images pre- and post- mitral valve replacement.



PANEL A.



PANEL B.

FIGURE 4

Intraoperative 3D TEE images of the patient in Figure 3. **Panel A** shows the surgeon's view of rheumatic mitral valve disease prior to repair. **Panel B** shows the surgeon's view after replacement of the mitral valve with a bioprosthetic valve.

References

1. Nicoara A, Skubas N, Ad N, Finley A, Hahn RT, Mahmood F, Mankad S, Nyman CB, Pagani F, Porter TR, Rehfeldt K, Stone M, Taylor B, Vegas A, Zimmerman KG, Zoghbi WA, Swaminathan M. Guidelines for the Use of Transesophageal Echocardiography to Assist with Surgical Decision-Making in the Operating Room: A Surgery-Based Approach: From the American Society of Echocardiography in Collaboration with the Society of Cardiovascular Anesthesiologists and the Society of Thoracic Surgeons. *J Am Soc Echocardiogr.* 2020 Jun;33(6):692-734. doi: 10.1016/j.echo.2020.03.002. Erratum in: *J Am Soc Echocardiogr.* 2020 Nov;33(11):1426. PMID: 32503709.
2. Otto CM, Nishimura RA, Bonow RO, Carabello BA, Erwin JP 3rd, Gentile F, Jneid H, Krieger EV, Mack M, McLeod C, O'Gara PT, Rigolin VH, Sundt TM 3rd, Thompson A, Toly C. 2020 ACC/AHA Guideline for the Management of Patients with Valvular Heart Disease: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation.* 2021 Feb 2;143(5):e35-e71. doi: 10.1161/CIR.0000000000000932. Epub 2020 Dec 17. Erratum in: *Circulation.* 2021 Feb 2;143(5): e228. Erratum in: *Circulation.* 2021 Mar 9;143(10): e784. PMID: 3

have had the privilege of representing ASE for several years at the American Medical Association (AMA) House of Delegates. The AMA remains one of the most important general medical associations in the United States for representing The House of Medicine.

While you might think of the AMA as an umbrella organization that doesn't have much specific effect on a member of ASE, that is not the case. The AMA owns a very important process called CPT coding which defines all of our procedures and classifies them uniformly for use in billing purposes. Another step in this process is the Relative Update Committee (RUC). This committee is an advisor to the Centers for Medicare & Medicaid Services (CMS) regarding evaluation of our procedures for both clinical work and practice expenses. While the RUC committee itself can't set the actual evaluation, CMS seriously considers all of the RUC committee recommendations when reaching a final conclusion about how much our procedures are worth when they are performed. ASE having delegate status at the AMA allows us to have direct access to this advisory committee. Therefore, we represent our profession and all ASE members when it comes to discussing our procedures rather than relying on another group of individuals or organizations to represent us indirectly. RUC committee meetings can be very contentious and require constant vigilance. ASE has a dedicated group of members, staff, and consultants who are closely



WHY SHOULD A MEMBER OF ASE ALSO BE A MEMBER OF THE AMERICAN MEDICAL ASSOCIATION?

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monitoring the activities of this committee and determining what the Society needs to do to react to any changes or challenges occurring on the committee. In addition, when new procedures are developed, these members also actively participate in the process to get new coding designations for our profession.

As an AMA delegate, I participate in the two major semi-annual meetings of the organization where we learn about issues across the entire spectrum of medical care. Sometimes these issues have a direct effect on ASE members, and it is our job to monitor this information and bring it back to Society leadership. In other circumstances, it important for us to know what areas of advocacy

The AMA owns a very important process called CPT coding which defines all of our procedures and classifies them uniformly for use in billing purposes.

may be important to support or speak against when these issues come before The House of Delegates. The House of Delegates itself is the primary legislative body of the AMA. It determines resolutions and recommendations and debates about major issues in medical care. As a delegate I am able to directly represent ASE's interests. Currently delegates are divided equally between members

of State Medical Societies and Subspecialties Societies, like ASE. The number of AMA delegates an organization can have is directly determined by how many active members of an organization (like ASE) are also active members of the AMA. It is vitally important for ASE physician members to join, or reactivate your membership in the AMA to maintain our delegate representation.

Virtually all major subspecialty societies in the country have representatives in the AMA House of Delegates. In cardiovascular medicine, the American College of Cardiology has the most representation. ASE has two delegates as do these organizations: Heart Rhythm Society, the Society for Cardiovascular Angiology and Intervention, the American

It is vitally important for ASE physician members to join, or reactivate your membership in the AMA to maintain our delegate representation.

Institute of Ultrasound and Medicine, the American Society of Nuclear Cardiology, and the Society of Cardiovascular CT among others. All of these subspecialty societies recognize the importance of participation in the AMA. At the AMA meetings, subspecialties of cardiology gather and caucus to help determine as carefully as possible all the activities that are important to cardiovascular medicine.

In summary, I encourage all ASE physician members to join or reactivate membership in the AMA. This is vital not only for your own individual benefit but also for the practice of echocardiography and our professional endeavors particularly advocacy and designation of all of our procedures.



 **ASE**
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HELP MAINTAIN ASE'S TWO SEATS IN THE HOUSE OF DELEGATES TO HELP US CONTINUE TO REPRESENT YOUR INTERESTS

The milestones ASE has achieved would not be possible without our two seats in the AMA House of Delegates. We have been able to directly impact, and take part in, the discussions regarding fair and accurate valuation for physician services and guarantee patients have access to quality care. It is imperative that ASE maintain the seats. To do so, **25% of ASE's U.S. physician members must also be members of the AMA.**

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2023 ASEF Council Travel Grant Applications NOW OPEN!



The ASE Foundation (ASEF) funds Council Travel Grants each spring for trainees to support their attendance at the ASE Annual Scientific Sessions. These grants are part of an ongoing effort by the Foundation and the Council Steering Committees to encourage trainees in cardiovascular specialties to focus on the respective echocardiography subspecialty and to recruit enthusiastic new members to the Councils. By facilitating their attendance at the annual meeting, these grants provide trainees with a deeper understanding of the imaging field, and cultivate the development of meaningful mentoring relationships with established imaging faculty.

The Council travel application is now open for all six ASE Councils

- [Cardiovascular Sonography Council](#)
- [Circulation & Vascular Ultrasound Council \(CAVUS\)](#)
- [Critical Care Echocardiography Council \(CCEC\)](#)
- [Interventional Echocardiography Council \(IE\)](#)
- [Pediatric and Congenital Heart Disease Council \(PCHD\)](#)
- [Perioperative Echocardiography Council \(COPE\)](#)

For eligibility requirements, please visit the Council webpages linked above. To apply, please login to the [Member Portal](#) and select Membership then Council Travel Grant Application link or [click here](#).



“Attending the ASE 2022 Scientific Sessions was serendipitous. Seeing so many people enthusiastic about echocardiography in one place truly sparks excitement about learning. Extremely grateful to be a recipient of the Council of Cardiovascular Sonography travel grant. This grant made presenting abstracts, A Mach-1 CASE presentation, networking, and so much more possible. The Sessions reminded me how far echo has come in such a short time, and what an exhilarating future it has to come”

– **ELISE HAWES** - Council of Cardiovascular Sonography Travel Grant Winner

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To advance cardiovascular ultrasound and improve lives through excellence in education, research, innovation, advocacy, and service to the profession and the public.