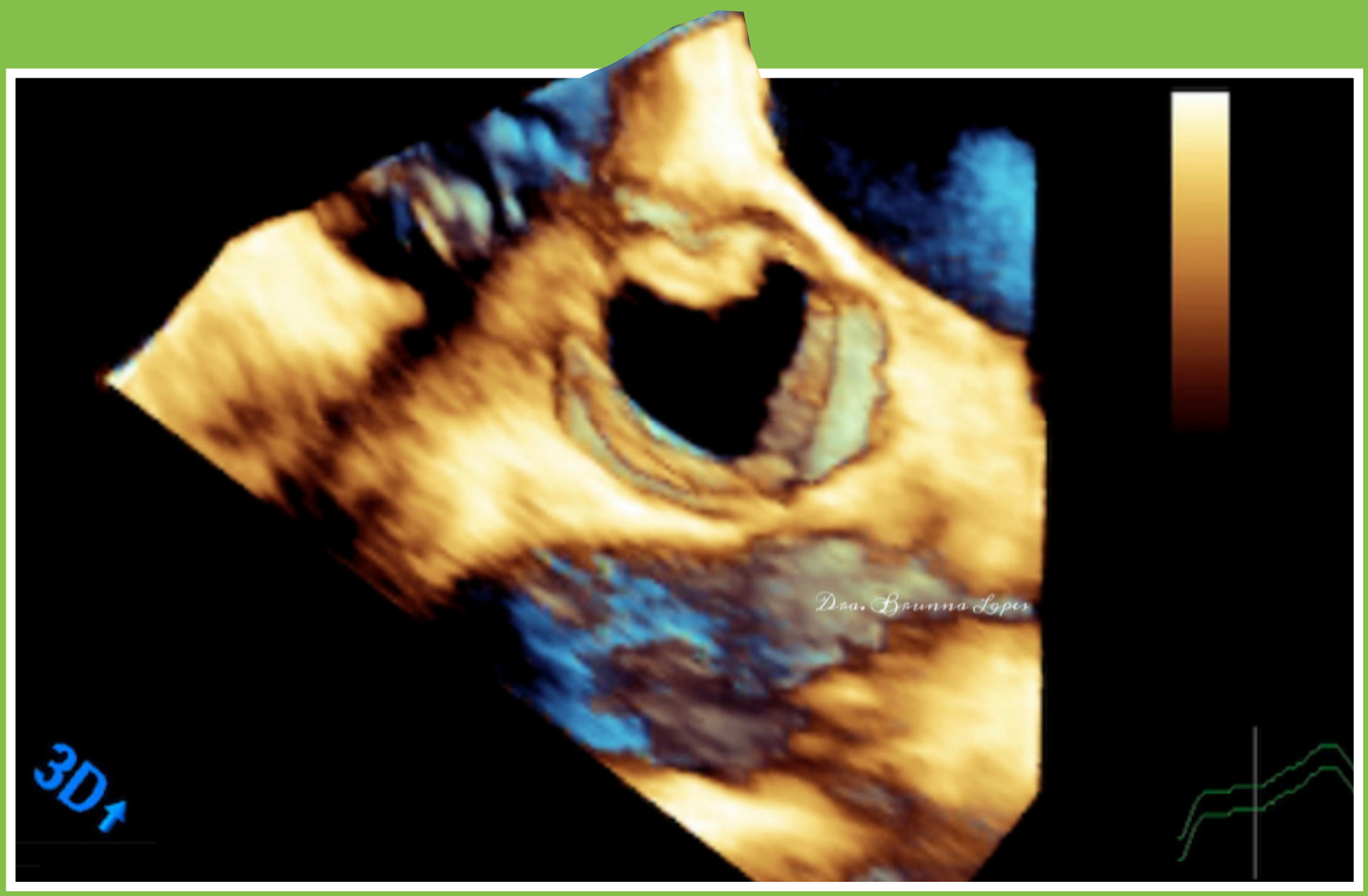
ECHO



VOLUME 11 ISSUE 9 **SEPTEMBER 2022**

2022-2023 EDUCATION CALENDAR

SEPTEMBER

Echo in Pediatric & Congenital Heart Disease: Echo Access Virtual Experience

September 17-18, 2022

Jointly provided by ASE and the ASE Foundation

OCTOBER

10th Annual Echo Florida

October 8-10, 2022
Walt Disney World®, Florida

Jointly provided by ASE and the ASE Foundation

NOVEMBER

Critical Care Echocardiography Review Course

November 7-9, 2022
Rosemont, IL

Provided in partnership with ASE and the Society for Critical Care Medicine

DECEMBER

Advanced Imaging Techniques: A Virtual Experience

December 3-4, 2022

Jointly provided by ASE and the ASE Foundation

JANUARY

32nd Annual Echo Hawaii

January 16-20, 2023
Westin Hapuna Beach Resort
Kohala Coast, Big Island, HI

Jointly provided by ASE and the ASE Foundation

FEBRUARY

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 2023

Jointly provided by ASE and the ASE Foundation

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

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

*This text also appears in the September JASE. **OnlineJASE.com***

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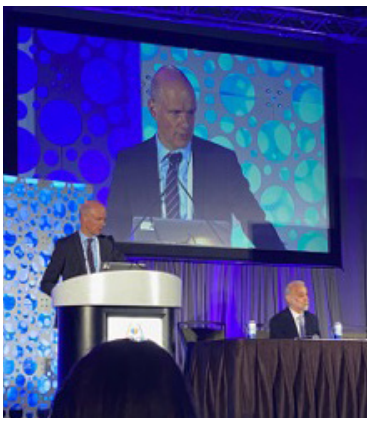

AMERICAN SOCIETY OF ECHOCARDIOGRAPHY

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American Society of Echocardiography

Cover art: Cover art: "Heart" Aortic Valve: Brunna Lopes de Oliveira Lopes, MD, Hospital do Coração Anis Rassi, Goiânia, Goiás, Brasil

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 LIVING GUIDELINES INITIATIVE: TRANSFORMING ASE'S GUIDELINES PROCESSES

*Contributed by **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 and **David H. Wiener, MD, FASE**, Director of Clinical Operations of the Jefferson Heart Institute, and Clinical Professor of Medicine, Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA and Chair of ASE's Guidelines and Standards Committee*

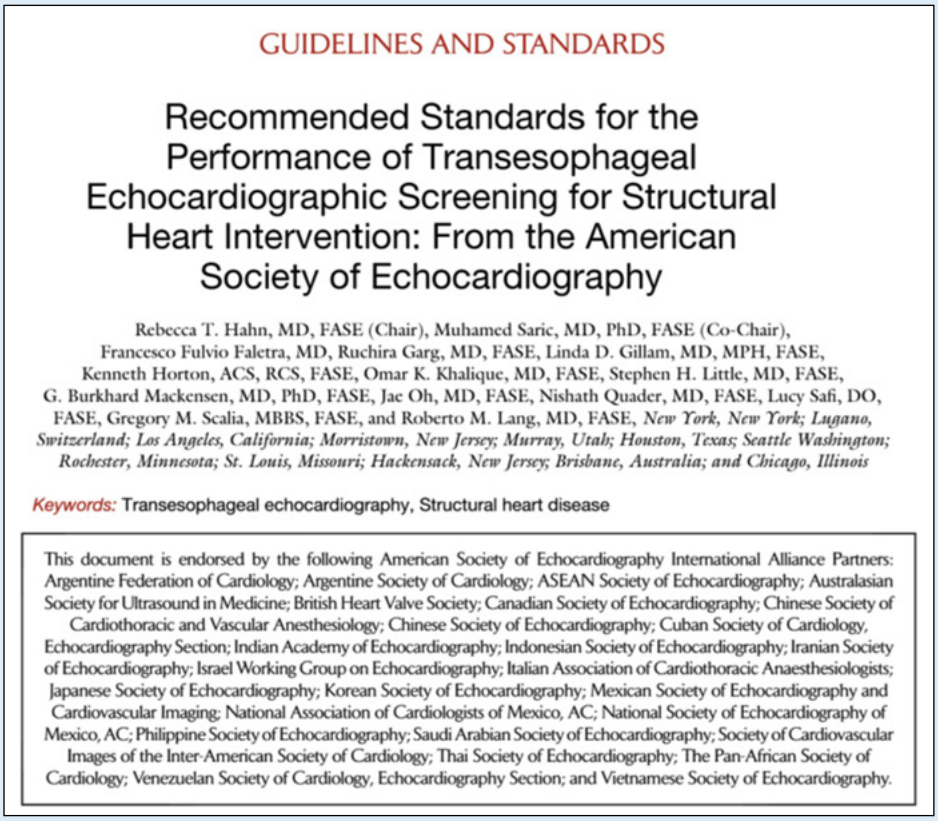
ASE is introducing transformative changes to the way in which our diverse and authoritative array of guidelines (Figure 1) are produced and updated. Until now, we did not have a systematic process to identify and update documents for revision when new knowledge becomes available; or to coordinate recommendations among our guidelines and with documents produced by other professional societies. We asked ourselves how best to promulgate both our revised and our new guidelines; and what is the optimal means to deliver graphical and text content to users whose preferred methods include web-based and social media.

David H. Wiener, MD, FASE

FIGURE 1: Contemporary yet evolving ASE guidelines.
A working group composed of Guidelines and Standards (G&S) chair and co-chair, David H. Wiener, MD, FASE, and David Orsinelli, MD, FASE, respectively; Vice President of Science and Clinical Guidelines Lisé Blandino, MS; along with Stephen H. Little, MD, FASE, Melissa Wasserman, RDCS, RCCS, FASE, and Scott Choyce, RDCS, RVT, RDMS, FASE, was charged last year with reimagining the guidelines process. In addition, a section of the second cohort of the Leadership Academy completed a capstone project on enhancing the dissemination of the guidelines which helped to guide the working group's efforts.

> ASE is introducing transformative changes to the way in which our diverse and authoritative array of guidelines are produced and updated.

Each guideline writing group is helmed by a chair and a co-chair. These subject matter experts remain vigilant for new information on the subject. We rethought their roles, extending their terms to five years after guideline publication. During that time, they will take part in periodic topic reviews to determine when their guideline is ripe for supplementation or revision.



GUIDELINES AND STANDARDS

Recommended Standards for the Performance of Transesophageal Echocardiographic Screening for Structural Heart Intervention: From the American Society of Echocardiography

Rebecca T. Hahn, MD, FASE (Chair), Muhamed Saric, MD, PhD, FASE (Co-Chair), Francesco Fulvio Faletra, MD, Ruchira Garg, MD, FASE, Linda D. Gillam, MD, MPH, FASE, Kenneth Horton, ACS, RCS, FASE, Omar K. Khalique, MD, FASE, Stephen H. Little, MD, FASE, G. Burkhard Mackensen, MD, PhD, FASE, Jae Oh, MD, FASE, Nishath Quader, MD, FASE, Lucy Safi, DO, FASE, Gregory M. Scalia, MBBS, FASE, and Roberto M. Lang, MD, FASE, *New York, New York; Lugano, Switzerland; Los Angeles, California; Morristown, New Jersey; Murray, Utah; Houston, Texas; Seattle Washington; Rochester, Minnesota; St. Louis, Missouri; Hackensack, New Jersey; Brisbane, Australia; and Chicago, Illinois*

Keywords: Transesophageal echocardiography, Structural heart disease

This document is endorsed by the following American Society of Echocardiography International Alliance Partners: Argentine Federation of Cardiology; Argentine Society of Cardiology; ASEAN Society of Echocardiography; Australasian Society for Ultrasound in Medicine; British Heart Valve Society; Canadian Society of Echocardiography; Chinese Society of Cardiothoracic and Vascular Anesthesiology; Chinese Society of Echocardiography; Cuban Society of Cardiology, Echocardiography Section; Indian Academy of Echocardiography; Indonesian Society of Echocardiography; Iranian Society of Echocardiography; Israel Working Group on Echocardiography; Italian Association of Cardiothoracic Anaesthesiologists; Japanese Society of Echocardiography; Korean Society of Echocardiography; Mexican Society of Echocardiography and Cardiovascular Imaging; National Association of Cardiologists of Mexico, AC; National Society of Echocardiography of Mexico, AC; Philippine Society of Echocardiography; Saudi Arabian Society of Echocardiography; Society of Cardiovascular Images of the Inter-American Society of Cardiology; Thai Society of Echocardiography; The Pan-African Society of Cardiology; Venezuelan Society of Cardiology, Echocardiography Section; and Vietnamese Society of Echocardiography.

FIGURE 1

To facilitate this, ASE added a Guidelines Research Specialist to our staff. Melanie Sturgeon MSE, MSLS, has joined the G&S team. With graduate degrees in both engineering and library science, she will work with each chair and co-chair, and with the leaders of the G&S Committee during and after publication, to actively research, edit, and assess guideline changes for ASE. Ms. Sturgeon is developing methods to leverage technology and search tools to surveil medical publications databases. Her skills will help us define consistent ASE guideline keywords, topic categories, titles, MeSH headings, and other forms of metadata to aid in classifying and searching for key ASE documents.

When to do a guideline update, whether a focused or a full revision, will be regularly reviewed among the leaders of G&S and with the Executive Committee. Ideas for updates, as well as new guideline proposals, are welcome, as always, from members of the G&S Committee and from any ASE member.

How to make our guidelines most accessible to our members and to the public was the working group's next focus. Recognizing the central role which social media such as Twitter play in disseminating medical knowledge (Figure 2), each writing group will now have a member designated as the social media captain. They will publicize their guideline on social media, including creating threads of linked tweets forming content summaries ("Tweetorials").

FIGURE 2: Guideline dissemination and discussion via Twitter Journal Club event.

The working group rethought the types of content which best serve users' differing needs. Once having read a guideline in its entirety, many of our members want to be able to

"Ideas for updates, as well as new guideline proposals, are welcome, as always, from members of the G&S Committee and from any ASE member.

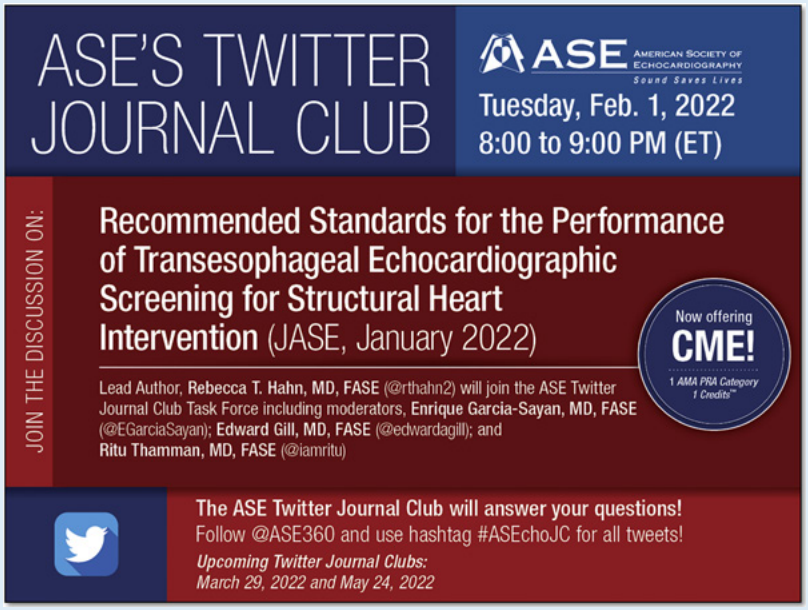


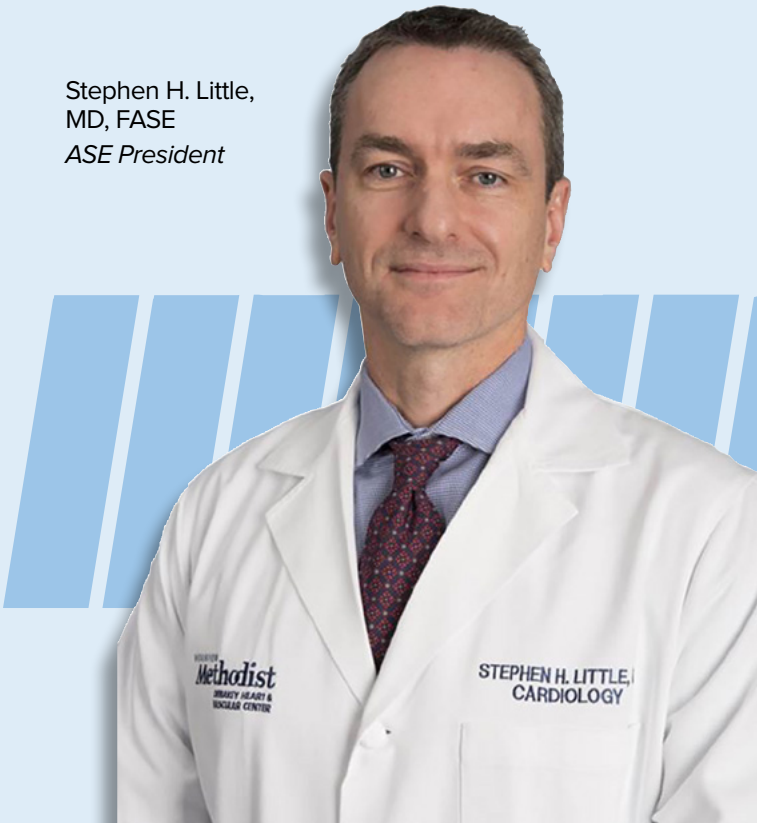
FIGURE 2

One of ASE's strategic goals is to be the leader in meeting the educational needs of the cardiovascular ultrasound community

rapidly access relevant "chunks" of the material, especially those presented in graphic form as charts, tables, illustrations, videos, and lists of key points. Breaking down silos among its committees, ASE will designate a member of each writing group from the beginning of the writing process as the liaison with the Education Committee. They will draw on the Education Committee's expert advice to design these materials as an organic part of the process of writing each guideline. Said materials will constitute a form of "Executive Summary" to which readers can refer, whether on the web, on their smartphones, or in print form.

ASE's website ASEcho.org is currently being reorganized, affording us the chance to establish better on-line "homes" for our guidelines. With Ms. Sturgeon's expertise, landing pages are being revamped for existing and future guidelines. Each guideline's landing page will be a one-stop shop for the guideline, executive summary, related translations, webinars, social media posts, and educational products.

With our plan and personnel in place, ASE will roll this exciting project out over the next year. One of ASE's strategic goals is to be the leader in meeting the educational needs of the cardiovascular ultrasound community. With the Living Guidelines dynamic process, and employing the latest means to design and promulgate our guidelines to meet the needs of our members and users, ASE continues that leadership.



Stephen H. Little, MD, FASE
ASE President

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

Ch-ch-ch-changes!

Contributed by ***Shiraz Maskatia, MD, FASE****;* ***Seda Tierney MD, FAAP, FASE, FACC, FAHA****;* ***Rita France, RDCS, RDMS, RT, FASE****;* ***Jennifer Hake, RDCS(PE/AE), RDMS(FE), FASE****; and* ***Jimmy Lu, MD, FASE***

We are fortunate to have such a vibrant and active pediatric and congenital community.

FALL IS A SEASON of transition. The leaves change colors, children go off to school (some more excitedly than others), and football returns. The ASE Pediatric and Congenital Heart Disease (PCHD) Steering Committee would also like to highlight some transitions.

The committee would like to thank Bhawna Arya, MD, FASE; Meryl Cohen, MD, MSEd, FASE, FACC, FAHA; Pei-Ni Jone, MD, FASE, FACC, FAHA; David Parra, MD, FASE; and Neha Soni-Patel, MEd, BSME, RCCS, RDCS(AE/PE), FASE for their service on the committee. Arya, Jone, and Soni-Patel served as members at large, providing content on behalf of the PCHD Council for Echo magazine, among other contributions. Dr. Cohen served as the council representative to the ASE Executive Committee. Dr. Parra served as Chair of the PCHD track at the 2022 Scientific Sessions, which was highly successful. Keith Collins, MS, RDCS, FASE, now serves as the council representative to the ASE Executive Committee. Luciana Young, MD, FAHA, FACC, FASE, will chair the PCHD track at the 2023 ASE Scientific Sessions, with Anitha Parthiban, MD, FASE, joining as the track co-chair. Rita France, RDCS, RDMS, RT, FASE, Jimmy Lu, MD, FASE, and Shiraz Maskatia, MD, FASE, are joining as members at large.

RITA FRANCE is the Technical Director at Children's Mercy Hospital in Kansas City. She has previously served on the ASE Ethics and Bylaws and the CME Committees, has presented at ASE Scientific Sessions, and was most recently a contributor on the "Recommendations for the Adult Cardiac Sonographer Performing Echocardiography to Screen for Critical Congenital Heart Disease in the Newborn." This speaks to her passion for increasing prenatal and postnatal detection of congenital heart disease through education and training of both adult echo and obstetric sonographers, and she chaired the first virtual Greater Kansas City Echo Symposium in May 2022 as part of this effort. She feels honored for the opportunity to work with and learn from the dedicated cardiologists and sonographers on the steering committee and contributing to its great work. Any free time is spent with her daughter and son – both graduates of Indiana University – and cheering on their alma mater – Go Hoosiers!

JIMMY LU is an Associate Professor at the University of Michigan (C.S. Mott Children's Hospital), where he is the Associate Director of Noninvasive Imaging. He has previously served ASE on the Research Committee and the FASE Training and Certification Advisory Committee. He has spoken regularly at the Scientific Sessions, most recently with a spoof of "We don't talk about Bruno" during a debate on multimodality imaging, which thankfully was not a part of the on-demand content. He is most excited about learning from and working with the talented and committed cardiologists and sonographers on the steering committee. Outside of work, he adores his wife and three girls and is unfortunately a die-hard Chicago sports fan.

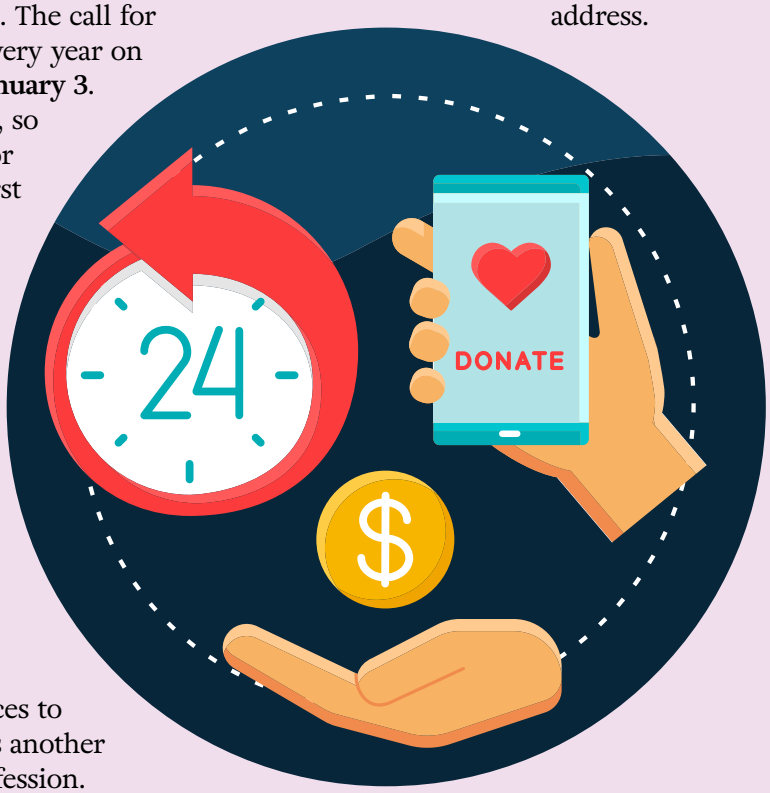
SHIRAZ MASKATIA is a Clinical Associate Professor of Pediatrics in the division of Cardiology at Stanford University School of Medicine, Lucile Packard Children's Hospital, where he is Associate Medical Director of the echo lab. He is proud to have been a member of ASE for over 10 years and a FASE for five years. He has previously served on the Ethics and Bylaws and CME committees. His training is in transthoracic, transesophageal, and fetal echocardiography and also in cardiac MRI. Professionally, his passion lies in using multiple imaging modalities to arrive at the optimal method to identify disease and track the progress of patients with heart disease across a life span. More recently, he has become increasingly interested in using multi-center data, gathered prospectively, to improve clinical decision-making and patient outcomes. His roles as husband, son, father of two (soon to be three), friend, and colleague fill in any available free time.

We are fortunate to have such a vibrant and active pediatric and congenital community. If you would like to get involved with the PCHD Steering Committee, several positions will open in 2023 including: Education Representative, Guidelines and Standards Committee Representative, and two Member at Large positions. As a PCHD representative, you would participate fully in the work of that respective committee, representing the interests of our community and reporting to the chair of the steering committee. Members at Large participate in the Council steering committee meetings. Beyond the designated representatives to each committee, there are numerous opportunities to get involved with all ASE committees, and increasing representation supports the profile and goals of our community. The various committees with which you can volunteer are listed on the ASE website. The call for volunteers officially opens every year on **November 1** and closes on **January 3**. FASE members are preferred, so if you have not yet applied for FASE, this is an important first step. Many current and former members of the PCHD Steering Committee have found these other committees to be meaningful ways to connect with the larger ASE community. For example, Seda Tierney was a member of the Guidelines and Standards Committee, and participated with a diverse group to develop living guidelines protocols from scratch.

Donating time or resources to the ASE Foundation (ASEF) is another way to contribute to our profession.

Donating time or resources to the ASE Foundation (ASEF) is another way to contribute to our profession. ASEF supports initiatives such as training scholarships, global outreach, and scientific research not supported by membership dues. These projects are completely dependent on donations by ASE members, industry partners, and community health care providers. Jennifer Hake, RDCS (PE/AE), RDMS(FE), FASE, has participated on the ASEF Annual Appeals Committee, which works to solicit and attract donations to ASEF by promoting fundraising endeavors. This is an extremely fun and engaging group, offering the opportunity for creativity and ingenuity while brainstorming new fundraising ideas. If committee involvement is not feasible for you at this time, please consider becoming a "Sustainer." This program allows you to give monthly through automatic payments charged to your credit card each month on the date you choose. Your donation can be any amount and can be started or stopped at any time. Learn more about becoming a sustainer.

The PCHD Steering Committee is very excited for the upcoming year! As representatives of the pediatric and congenital community, we are eager to hear from you if there are concerns or opinions which we can help address.



ASE 2022 Scientific Session:

Recap for Perioperative Track

*Contributed by **Richard Sheu, MD, FASE**, University of Washington Medical Center, Seattle, WA*

The excitement was palpable, as it was the first in-person Scientific Sessions since the start of the COVID pandemic back in 2019

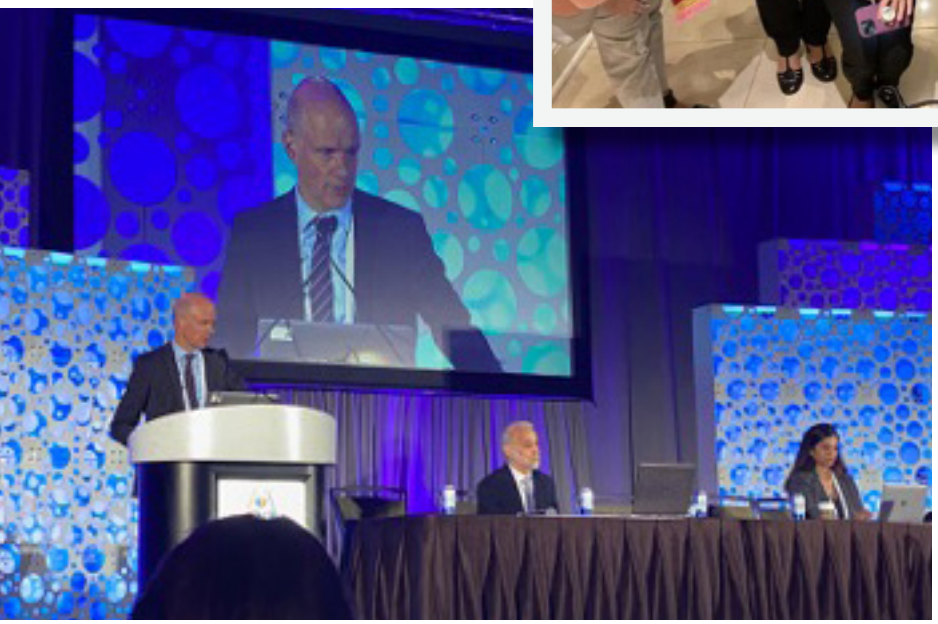
THE HIGHLY ANTICIPATED ASE Scientific Sessions took place in Seattle, Washington June 10-13, 2022. The excitement was palpable, as it was the first in-person Scientific Sessions since the start of the COVID pandemic back in 2019. Recognizing some medical conferences had unfortunately contributed to spreading of COVID, the ASE Executive Committee took the responsible approach by proactively consulting infectious disease experts regarding strategies for a safe meeting environment. ASE established a check point prior to entering the conference space to verify participant vaccination status, and this set the tone for the seriousness of this commitment. Safety measures such as mandatory medical grade masks indoors (when not eating, drinking, or speaking on stage), on-site free COVID self-test kits, physical distancing reminders, and readily available hand sanitizers also demonstrated ASE's pledge to members' well-being.

The Council of Perioperative Echocardiography (COPE) Steering Committee members were active at various sessions promoting their work and vision to the general ASE membership. I had the honor of kicking off the efforts by joining a panel of experts at the Intersocietal Accreditation Commission Boot Camp Special Session and shared my experience leading one of the pilot sites navigating through the application for the soon-to-come Perioperative Echocardiography Accreditation. The session was followed by a hugely successful COPE networking event where COPE Steering Committee members happily greeted colleagues who were interested in learning more about COPE endeavors.

▲ Kimberly Howard-Quijano, MD, MS, FASE (left) and Dr. Himani Bhatt, MD, MPA, FASE (right) at the "Workshop: Innovations in Perioperative Imaging"

The COPE Scientific Sessions track offered a total of four sessions and 21 presentations, in addition to an interactive workshop on Innovations in Perioperative Imaging. Selected faculty were not only leaders in their respective fields, but also represented diverse backgrounds. The speakers succeeded in delivering informative and engaging panels. Cutting-edge updates on newly published data and real-life intraoperative surgical decision-making processes and algorithms were discussed throughout the sessions. Parallel to the perioperative echocardiography sessions, COPE members were highly integrated into various other sessions by either moderating or presenting hot topics such as valvular and structural heart disease, interventional echocardiography standards, and point of care ultrasound. Highlights include local liaison and COPE Chair, Dr. Burkhard Mackensen, showcasing stunning transesophageal echocardiographic images during his talks that impressed even the toughest crowd, COPE Chair-Elect, Dr. Sheela Pai

▲ Selfie Time (left to right) Drs. Sheela Pai Cole, Himani Bhatt, Sharon McCartney, Bola Faloye, Kiran Belani, and Madhav Swaminathan



◀ G. Burkhard Mackensen, MD, PhD, FASE, delivering talk "Imaging for Percutaneous Mitral Procedures: Pearls to Take Your Results to the Next Level"

▼ Enjoying the ASE Foundation Research Awards Gala. Left to right: Drs. Kimberly Howard-Quijano, Sharon McCartney, and Kiran Belani.

▲ Ken Horton, ACS, RCS, FASE, delivering a case presentation at the "Great Debates: Approaches to Mitral Regurgitation and 3D Quantification" session.

▲ Himani Bhatt, MD, MPA, FASE, delivering talk "Systolic Anterior Motion Risks: Patient vs. Procedure"

Cole, provided an in-depth discussion on mechanical circulatory support, COPE Scientific Session track Co-Chair, Dr. Jeremy Thaden, reviewed transcatheter paravalvular leak closure tidbits, and COPE Member at Large cardiothoracic surgeon, and Dr. Danny Ramzy, delivered a one-two punch at the exciting Great Debates session on surgical vs. transcatheter intervention of mitral valve diseases.

The COPE Steering Committee meeting also took place during the Scientific Sessions. It was a bittersweet moment to bid farewell to leaving members, but also exciting to welcome new volunteers. Council members brainstormed ideas for different educational products such as webinars and newsletters, discussed effective channels for outreach programs, and prepared for new inter-council collaborations for the upcoming year. Outstanding Achievement Award in Perioperative Echocardiography was given to the legendary Dr. Annette Vegas. This accomplishment was also celebrated at the 13th Annual ASE Foundation Research Awards Gala later in the evening. As the wine and conversation flowed, gala attendees joyously danced through the night.

COPE Scientific Session track Chair Dr. Kimberly Howard-Quijano provided her final thoughts on this year's outstanding program, "The ASE in-person Scientific Sessions were a great success this year. It was wonderful to finally reconnect in person, catching up with old friends and meeting new ones. It was a successful meeting filled with state-of-the-art education, great memories, and lots of smiles. We look forward to seeing everyone again in 2023!"

Getting Involved:

A Path to Serving on the Council on Cardiovascular Sonography

Contributed by ***Melissa Wasserman, RDCS, RCCS, FASE***

ARE YOU A SONOGRAPHER member of ASE who wants to become more involved? Have you thought about applying to the ASE Council on Cardiovascular Sonography Steering Committee but are unsure of what that it entails? Are you worried about getting in over your head or making too big of a commitment?

You are not alone!

In October, ASE will announce open positions for each of its five councils:

- *Cardiovascular Sonography*
- *Circulation and Vascular Ultrasound*
- *Critical Care Echocardiography*
- *Pediatric and Congenital Heart Disease*
- *Perioperative Echocardiography*

There is a council to represent everyone in ASE, bringing together members with similar professional interests and areas of expertise

There is a council to represent everyone in ASE, bringing together members with similar professional interests and areas of expertise while also providing a forum for networking and sharing of knowledge. These councils help create educational offerings, and provide guidance of standards of care not just to the board of directors, but also to the Guidelines and Standards Committee.

The ASE Council on Cardiovascular Sonography specifically, is dedicated to supporting cardiovascular ultrasound by communicating and addressing issues of importance to the sonographer community. It also provides sonographer-led education and ensures sonographers have a place and voice on the ASE Board of Directors, as well as on every committee and council. Within the Council, there are different positions that can be held. The upcoming open positions are member at large, education committee representative and the position I currently hold, guidelines and standards committee representative.

To give members an inside look at how we got to these positions and what we have done now that we are serving, Dan Bourque, Carol Mitchell, and I got together to detail our journey, tasks, and commitments while serving on the Council. Happy Reading!

Daniel Bourque, MS, ACS, RCS, FASE – Member at Large

Thirteen years ago, when I joined the field of cardiac ultrasound, I aspired to become involved with ASE. There are many volunteer opportunities offered by the ASE and the

Sonography Council is one of the highest distinctions. In my pursuit of this opportunity these are questions that came up:

1. *How do you get placed on the council steering committee?*
2. *When placed on the steering committee, what are the responsibilities?*

To answer these questions, I will describe my path to serving as a Member at Large on the Council Steering Committee. I began by reaching out to ASE members who had given talks and I expressed my interest in serving. I had experience as an adjunct faculty member and decided that speaking was the best path for me to get noticed within ASE. I also applied for FASE distinction and ensured my membership with ASE was current.

Giving lectures is a way to demonstrate strong professional knowledge, poise, and commitment. Preparation for a lecture can encompass the charges of becoming a council member. I was able to give my first talk as a student in 2009 and that opened the door to subsequent talks in later years. Through the lectures I was able to make connections with members and as my network grew, more opportunities arose. This ultimately led to my nomination for the council member at large position.

The member at large is responsible for the supervision and direction of the affairs of the council. They execute the charges of the council. Some of the tasks that the member at large may perform include the following:

- *Support the organization's interest areas by communicating issues of importance to the Council's membership;*
- *Provide guidance to the Board regarding specialty issues;*
- *Provide a forum for members with similar interests to network;*
- *Recommend educational offerings linked to their specialty for patients, including guidance to the ASE Scientific Sessions Program Committee;*
- *Provide member value through regular communications with the specialty membership (Echo magazine, Connect@ASE, and ASE social media platforms);*
- *Provide a training vehicle for emerging leaders in the specialty areas that includes personal and professional development;*
- *Recommend specialty related vehicles and resources to the Board of Directors and committees that assist the organization in meeting its strategic goals;*
- *Provide member engagement opportunities at the council level that are in alignment with the organization's strategic goals;*
- *Provide guidance to ASE's education committee for improvements for faculty related to ASE's live and virtual educational offerings;*
- *Submit nominations to ASE's awards committee for council specific awards;*
- *Monitor and mentor the activities of the council representatives on ASE committees and task forces;*
- *Solicit applications for ASE Foundation travel grants for Scientific Sessions.*

As a member at large on the Sonography Council you have the ability to carve your own path of involvement. The opportunities to become involved are many and can lead to a more rewarding career in echocardiography. Start your journey today!

Carol Mitchell, PhD, RDMS, RDCS, RVT, RT(R), ACS, FASE – Education Committee Representative

Many years ago, I joined ASE with the idea of becoming more involved in my profession and specifically looking at ways to develop educational resources and support standardized education for physicians and sonographers while in training and post-graduation. Having the opportunity to serve on the ASE Education Committee is a great way to contribute to development and approval of educational programs and products to meet the needs of physicians, sonographers, scientists and other allied health personnel at all levels of their career. As the council representative to the Education Committee, one is responsible for taking education requests from the council to the Education Committee and responsible for reporting back to the council the education committee activities. The Education Committee is charged with the following tasks;

- *Execute plans for educational initiatives based on ASE's strategic goals*
- *Oversee the educational content for ASE live courses*
- *Recommend new educational strategies and methods that will help establish ASE as the resource for cardiovascular ultrasound education*

- *Advise the Board of Directors and/or Finance Committee regarding the feasibility and appropriateness of new educational activities*
- *Review and recommend approval requests for ASE sponsorship of CME programs*
- *Review applications for "co-sponsorship without CME" activities*
- *Review course evaluations and make recommendations to the Course Directors/Chairs for improvements*
- *Review course financials and evaluations to provide recommendations to the Board of Directors and Treasurer on changes to existing courses especially regarding any impact to the finances*
- *Recommend speakers and topics for web-based educational initiatives.*
- *Explore strategic partnerships with larger healthcare institutions or other CME providers with similar interests in echocardiography*
- *Solicit and review applications for course co-directors, making recommendations to Executive Committee*

Serving on this committee has been a wonderful experience, and I have learned so much about curriculum development and state of the art technology for providing education.

Melissa Wasserman, RDCS, RCCS, FASE – Guidelines & Standards Committee Representative

If you asked me a decade ago if I'd be excited to serve as the Guidelines & Standards (G&S) representative to the Council on Cardiovascular Sonography, or any council for that matter, I'm fairly certain I would have said no. I would have thought, "What could I possibly contribute to that process?"

What a difference a few years makes! I am now in a position to make substantive contributions to the sonographer community as the G&S representative both as an effective liaison and more importantly as a vital advocate. In the last three to four years, I have been a part of five ASE guideline writing groups, three being exclusively pediatric-based and the other two being a direct collaboration with members of the Council on Cardiovascular Sonography.

Being a member of the writing group and particularly as the lead author on a guideline, I've learned so much! Through every step of a guideline development, from idea generation to finalization of the manuscript, ***there are opportunities for sonographers!*** Some of the responsibilities and tasks of the Guidelines and Standards Committee are to:

Through every step of a guideline development, from idea generation to finalization of the manuscript, ***there are opportunities for sonographers!***

- *Review and edit new documents for consistency and alignment with the Society's standards and values.*
- *Identify areas in need of standardization as well as potential leaders to direct the development of guideline documents.*
- *Review documents led by other societies that seek endorsement by the ASE.*
- *Review existing ASE documents to assess update requirements.*
- *Suggest ways to disseminate guidelines to members, physicians, the public and private payers.*

This position requires time. Time to review content, images, and format of proposed documents as well as attention to detail. These documents need to be focused and concise, they need to make formal recommendations and have clear objectives. Equally as important, these documents require sonographer authorship and contribution.

The most rewarding part of serving this role is reading a document formally published in JASE that you personally reviewed and edited, and is now being used to provide guidance to the rest of our cardiovascular ultrasound community!

Publishing in CASE Journal for Sonographers:

Intimidating or Inspiring?

Contributed by ***Madeline Jankowski ACS, RDCS, FASE*** *and* ***Melissa Wasserman, RDCS, RCCS, FASE***

IN THE FIELD of echocardiography, many of us identify as visual or case-based learners because it helps us imagine real-life scenarios. CASE journal is the visual learners' tool for echocardiography and is important for the life-long learner by facilitating faster diagnosis, leading to improved treatment for our patients. This inclusive journal highlights published cases that incorporate many of the skills you as a sonographer, or echocardiographer, already have! This type of publication is a great way to start your publishing journey and get acquainted with your writing skills.

So, how do we write a CASE report?

Here is a step-by-step guide from CASE Editor, Dr. Vince Sorrell.

BEFORE PREPARING FOR YOUR CASE REPORT:

1. ***Discuss interesting aspects*** of the case with your peers!
2. ***Create deadlines and a working timeframe*** to accomplish the following workflow:
   Outline > Draft > Image Preparation > Completion of the Report > Dissemination of report/editing > Journal Submission
3. ***Discuss authorship with colleagues*** if this is your project (your idea/your organizational efforts). YOU should be first author.
   - All authors should contribute substantially, so delegate work to co-authors to reduce individual effort. First authors most often take on submission duties, correspondence with journal editors, and communication to coauthors. Possible co-author roles include:
     a. Draft writer: Write a draft outline for the CASE report
     b. Medical Reviewer: Obtain the medical history in the EMR
     c. Image Creator: Pull image data, anonymize image displays, select highest quality images, create smooth videos, add arrows / labels to optimal educational value
     d. Literature Reviewer: Searches medical literature related to your CASE report (for background and discussion and citations)
     e. Primary writer & editor: Collates outlines, notes, and drafts into a single report
     f. External Consultant: Reviews report for ease of reading, clarity of timelines, comprehensive of teaching points and conclusions
     g. Corresponding Author (you): proposes idea to potential co-authors, establishes deadlines, is careful to adhere to ALL journal submission standards
   - If you have a co-author who is a physician, have them take the lead on collecting the medical notes from the EMR (history, physical exam, relevant labs, etc)
5. ***Make the outline/draft chronological*** (report should follow the same timeline)

WHAT TO INCLUDE IN YOUR CASE REPORT:

6. ***An attractive TITLE*** that is eye (or ear!)-catching. Make someone stop to read the full report (but, be honest and adhere to what is addressed in the report). KEEP IT CONCISE.
7. ***Highlight 3-5 main teaching points***. You should have an idea of the main reason you wanted to write up this CASE report, but if you complete these at the end, you may find you have new teaching highlights to include.
8. ***Background/Introduction*** should briefly mention the relevance of the CASE you are reporting.
9. The ***CASE Presentation*** will walk through the CASE from initial presentation to end-of-care. Include follow up when available since readers always want to know what happened to your patient. Insert references to IMAGES (see below) in the order they are obtained/mentioned.
10. ***Discussion:*** provide a brief explanation of the similarities and discrepancies of your report relative to other published reports.
    - AVOID hyperbole: e.g., OURS IS THE FIRST EVER CASE OF XXX.
    - Compare and contrast why your CASE has value.
    - Include what you learned from it.
11. ***Conclusions:*** short and succinct; reiterates the most important aspect of your CASE. The final opportunity to leave a lasting impression of your teaching point(s).
12. ***IMAGES:*** this may be the MOST important part of the CASE report
    - Nothing is MORE IMPORTANT than image QUALITY
    - Nothing will HELP you more than HIGH QUALITY images
    - Nothing will lead to a quicker rejection than POOR Quality images
    - Include (relevant) multi-modality correlations when available
    - Include pathology, histology, or gross anatomy when available
    - Include a video for any still images (helps the reader fully appreciate the still figures)

HEY SONOGRAPHERS!

Did you know that the ASE Council on Cardiovascular Sonography Steering Committee is challenging ASE sonographers around the world to submit cases to CASE as **lead author**? The first ten articles accepted will have their open access fee waived (valued up to $950 per accepted case). There are only a few waivers left to award before the deadline of December 2022 - submit your case to CASE today. We look forward to learning from you!

DEBUNKING CASE MYTHS

CASE journal is a great way for sonographers to engage in writing and publishing. Doing these types of publications is a great way to make your curriculum vitae (CV) more robust, but also puts you on the path towards your ASE Fellow of the American Society of Echocardiography (FASE) credential.

Honing your skill of writing can be intimidating, especially for a sonographer. To address some of these common concerns, we asked CASE Editor-in-Chief, Vincent Sorrell, MD, FASE, to bust some of the myths surrounding CASE journal and submission.

- ***"CASE is not a journal of 'one-offs'."*** – The case you are writing about does not have to be unusual or rare. It can simply be the best example you have ever seen of a type of heart disease we see in our everyday practice. Maybe your case has a common presentation but with an unusual cause. Did you learn anything? Were you excited to show your peers? This would be perfect in CASE!
- ***"Every echo you perform today has a teaching point, and every teaching point is a potential new CASE report."*** – Maybe you had a patient with every textbook sign of echocardiographic evidence of pulmonary hypertension. Maybe you almost missed a right to left PDA because your color scale was too high. Ever perform an echo that caused you to think, 'I wish I had a fellow to show this to. It is exactly what we learn about?' Nothing is "too simple."
- ***"There are many 'myths' related to publishing."*** – These are preconceived notions that sonographers believe regarding publishing including:
  - ⃠ You must be a published author to publish
  - ⃠ Physicians are better writers than sonographers
  - ⃠ Since sonographers do not manage the patient, they do not fulfill the criteria to be an author
  - ⃠ Sonographers cannot publish if working in non-academic setting
  - ⃠ Sonographers must work in a hospital, not office-based clinics

With support from Dr. Sorrell, we hope this guide is helpful while constructing your CASE report. Every time you write you will grow more confident in your medical writing, echo reporting skills, and ability to identify teaching points! We cannot wait to see your work and bolster your publishing journey.

Sonographer

VOLUNTEER OF THE MONTH

Congratulations

Brittany Byrd, RDCS (AE,FE,PE), FASE

Q
A

When and how did you get involved with cardiovascular ultrasound?

Like many 22-year-olds, I was waiting tables, and had no idea what I wanted to do with my life after I graduated from college. I obtained my bachelor's degree in biology. I knew I obviously couldn't wait tables forever! I learned about cardiovascular ultrasound after discussing options with my friend and her family. Her dad was a cardiologist and her sister was an adult cardiac sonographer. I knew this would open the door for me to the medical field, but I never expected to find it so rewarding with just the right amount of complexity. Honestly, I thought I would only do echoes for a couple years until I decided what I really wanted to be when I grew up. Yet, here we are 12 years later and it's definitely not boring!

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

This is a tricky question for me, I have been a pediatric and fetal traveling sonographer for the past three years. I don't tend to stay in the same place for more than a few months. I was lucky enough to be hired by Duke Children's straight out of sonography school. I still marvel at their patience with teaching me, I know it wasn't easy. After seven years at Duke, I decided to move to an outpatient setting. Not long after that, I made a big scary jump into traveling. Since then, I have worked at many different facilities along the east coast. I have met tons of wonderful people in the field and learned so much about how other facilities run. I really enjoy the connections and exposure traveling offers me. The freedom traveling offers allows me to be more involved in global outreach opportunities.

When and how did you get involved with the ASE?

I joined ASE in 2016 with the sole purpose of attending the Scientific Sessions, but then I was hooked. All the knowledge and great minds of echo in one place was truly mesmerizing. With the help of mentors like Drs. Greg Tatum and Piers Barker at Duke Children's, they pushed me out of my comfort zone and into speaking engagements, committees, volunteering for global outreach events, and finally obtaining my FASE.

> **"I would encourage everyone to volunteer, with so many options there's something for everyone."**

Why do you volunteer for ASE?

I find it rewarding for a number of reasons; to connect with like-minded people who yearn for knowledge and collaboration across the world. Volunteering with ASE has afforded me multiple connections that feed my passion for global outreach. I've been fortunate to spend time in India, Kenya, and a trip to Rwanda is right around the corner. It's important to engage with people from different backgrounds in a supportive environment where we can all share our experiences and work towards a common goal. I would encourage everyone to volunteer, with so many options there's something for everyone. ASE fosters an environment with strong sonographer support and it's so important that our voices are heard.

> **Whatever changes and advancements come our way, I look forward to embracing and using them to ensure the best outcome for our patients.**

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

The Membership Steering committee was my first committee, I started as a member at large and I'm currently serving as co-chair. Last year, I was invited to serve on the ASE Foundation Annual Appeal committee as pediatric representative. Coffee Day is in September and Giving Tuesday in November will be here before we know it. Keep an eye out for the emails and don't forget to donate. This is my first year serving on the Guidelines and Standards committee, I'm really excited to learn more about the process of creating and updating guidelines. I had an amazing experience with the ASE Foundation in Kenya in 2019 and have been fortunate to serve as faculty at Scientific Sessions and the virtual Pediatric and Congenital Heart Disease conference this September. Given my nomadic lifestyle it has been difficult to be involved with local echo societies, but I have been involved in a few international lectures in India and Kenya, virtual platforms have opened up more collaboration opportunities with these teaching hospitals in the last few years.

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

Having a mentor is important, someone who you can bounce ideas off of and who will help foster growth. We all need a little nudge from time to time. I've been lucky over the years to encounter so many people eager to share their knowledge and equally eager to see others succeed. When I received my FASE, it really opened up a lot of opportunities for me within ASE. I feel like I unlocked the next level! Also, attending the Scientific Sessions, I know it can be sticker shock at first but it's well worth the networking, knowledge, and opportunities it opens up. Obtaining FASE is a great place to start. Don't be afraid to step out of your comfort zone, it's the best way to grow and find out what you're truly capable of accomplishing.

What is your vision for the future of cardiovascular sonography?

It is tough to imagine what the future of echocardiography will bring, so much has changed from when I first entered the field. Flow mapping still blows my mind! I'm looking forward to future advancements in adult congenital imaging, and bridging the gap between adult and congenital cardiology. With a growing overlap of patients, this gap is getting smaller each year. I'd love to see more collaboration, not only across the globe, but also among facilities throughout the United States. There are still a lot of rural hospitals that do not get the support they need, especially when it comes to congenital heart disease. There is so much we can learn from each other; knowledge is meant to be shared. ASE's Echo in Pediatric and Congenital Heart Disease Virtual Experience is a big step in the world of pediatrics, and I look forward to more conferences specific to congenital heart disease and fetal diagnosis. Whatever changes and advancements come our way, I look forward to embracing and using them to ensure the best outcome for our patients.

ASE AND IEEE UFFC-S HACK AT CRITICAL CARE MONITORING CHALLENGES AT THE 2022 ASE SCIENTIFIC SESSIONS

Contributed by Meredith Morovati, MBA, ASE's
Vice President of Business Development & External Relations

On June 14, 2022, the American Society of Echocardiography (ASE) co-hosted a Hackathon event with the Institute of Electrical and Electronics Engineers Ultrasonics, Ferroelectrics, and Frequency Control Society (IEEE UFFC-S) in Seattle, Washington. The idea for the hackathon came out of an ASE strategic planning session and was an idea to support ASE' strategic goal #3 which states ASE is indispensable for the development of any new cardiovascular ultrasound technology and applications. ASE reached out to IEEE UFFC-S to if they would like to participate in a Hackathon Event designed to address the clinical problem of how to best use ultrasound for continuous anatomic or physiologic monitoring at discrete time points to monitor and optimize treatment for critical care patients. IEEE UFFC-S accepted the opportunity to conduct a hackathon and was instrumental in working with ASE to design the hack-a-thon problem statement, constraints and the judging criteria. IEEE UFFC-S was also instrumental in recruiting IEE-UFFC-S members to participate and serve as judges for the hackathon.

The event brought together experts from their respective fields to work toward advancing ultrasound technology to support continuous monitoring of Critical care patients.

The day opened with ASE 2020-2021 President, Ray Stainback, MD, FASE, and IEEE UFFC-S President, Mark Schafer, PhD, welcoming the group with opening remarks. Then, each team's members introduced themselves, explained their respective backgrounds, and the journey that brought them to the field and this particular interest area. Participants included physician and engineer practitioners and educators from diverse backgrounds including direct patient care and technology development.

The planning Committee and judging panel was led by event Chair, Carol Mitchell, PhD, RDMS, RDCS, RVT, RT(R), ACS, FASE, from University of Wisconsin-Madison. The event judges included Drs. Stainback and Shafer along with Shazia Bhombal, MD (ASE member); Vandana Sachdev, MD, FASE (ASE Board of Directors); and Kai Thomenius, PhD (IEEE UFFC-S member). Each judge greeted the teams who were then left to work on their projects for the morning.

Each of the four teams had three participants – one physician (ASE) and two engineers (IEEE UFFC-S). Fortunately, a hybrid format accommodated for COVID and travel restrictions, allowed at least one member from each team to be present remotely. The international teams (USA, France, Saudi Arabia, Greece, and the Netherlands) had previously met as groups to research and develop preliminary solutions over the previous four months. The morning of the event each group finalized their product for a 10-minute pitch to the judging committee. At 1:30 PM, after a productive morning and early afternoon, the groups wrapped up their work. Robin Wiegerink, ASE's CEO, then stepped in to welcome the teams and to thank them all for their hard work and participation. Thereafter, each of the four teams made a 10-minute presentation and fielded five minutes of questions from the panel before judging deliberation commenced.

Each team adopted a creative name reflecting the proposed product characteristics.

- Team **WEAR/Me** – *Dr. Navchetan Awasthi (IEEE, Netherlands), Dr. Akhil Narang (ASE, USA), Dr. Mirza Pasovi (IEEE, Saudi Arabia)*
- Team **Triple Sonos** – *Dr. Spyretta Golemati (IEEE, Greece), Dr. Sanket Shah (ASE, USA), Dr. Sahil Sharma (IEEE, France)*
- Team **MUSIC** – *Dr. Tiffany Chen (ASE, USA), Yashwanth Nanda Kumar (IEEE, USA), Dr. Jesse Ton-pin Yen (IEEE, USA)*
- Team **Vigilance** – *Bryan Cunitz (IEEE, USA), Alexander Alvarez (IEEE, USA), Dr. Jeffrey Astbury (ASE, USA)*

The first group presentation was by, **WEAR/Me**. This group outlined the lack of advancement in the field of continuous ultrasound monitoring. Conventional technology in critical care monitoring including non-invasive blood pressure monitoring and telemetry in addition to invasive monitoring such as arterial pressure and pulmonary artery catheter. Less commonly used are real-time, continuous transesophageal echocardiography which is invasive and requires intubation and sedation. This group focused on developing a wearable ultrasound technology.

WEAR/Me's solution was to develop a small left ventricular outflow tract (LVOT) wearable ultrasound patch that could be positioned with the use of artificial intelli-

2022 ASE and IEEE UFFC-S Hackathon judges and participants. Left to right: Raymond Stainback, Carol Mitchell, Kai Thomenius, Tiffany Chen, Jesse Ton-pin Yen, Akhil Narang, Bryan Cunitz, Sanket Shah, Alexander Alverez, Spyretta Golemati, Shazia Bhombal, Vandana Sachdev, and Mark Schafer.

gence-based positioning on the chest wall. The device would consist of a small ultrasound array transducer that uses an existing technology from capacitive ultrasound. Using pulsed wave ultrasound, the device would capture the LVOT velocity time integral (VTI) to allow for determination of cardiac output. The device could by synchronized to mobile phones or central telemetry via Bluetooth technology and would allow for real-time, continuous monitoring. While the technology would likely be most useful in immobilized patients, the device could also be secured to patients who are awake and potentially ambulatory.

This WEARable will result in:

- Baseline assessments of cardiac output
- Trend changes in cardiac output in response to therapies or interventions
- Data integrated into EMRs as a NEW vital sign (cardiac output)
- All with a democratic, user friendly application at low cost with a reusable core

Triple Sonos was the second presentation. The group opened with a discussion about cardiac output monitoring in the critical care and intensive care unit (ICU) environment including low cardiac output. They posited that the clinical need is for analyzed hemodynamic data, specifically in low cardiac output syndrome. The group argued that cardiac output could be obtained by continuing ultrasound monitoring, non-invasively.

For example, there are current complications with arterial catheter, especially with pediatric patients. However, continuous echo cardiac output can be quantified, and it is also proven that you can monitor hemodynamic data. Team Triple Sonos proposed to acquire stroke volume with a cylindrical column. They suggest an ultrasound receiver that can get flow velocity, and use 2D-echo with continual monitoring. This solution would be a wearable, small sensor that you place on the patient's neck, using a polydimethylsiloxane (PDMS) patch. There is currently a commercial transducer that does this, and this solution will use the tip of this for the patch. Advantages of this approach is that it is a wearable device already shown to work in proof of concept with a broad bandwidth, and it is easy to handle.

This team's solution would add an imagine-analysis component. They will acquire a 2D-echo sequence of a few seconds, and ICU staff can confirm artificial intelligence (AI)-detected wall boundaries using currently available AI software. They envision the sensor to acquire a baseline and then

intermittently over a period of time to have more data to extract. This can be used to update the cardiac output info and to validate procedures.

This is noninvasive, will provide continuous monitoring with 2D Doppler, and rapid feedback in response of therapy.

In summary, Team Triple Sonos' solution provides:

- A novel patch based on ultrasound technology with AI software for acquisition support
- Continual monitoring of total cardiac output
- Simple placement with practical graphic and numerical data
- Provide instant feedback which can guide ICU interventions or medical therapy
- All based upon normal ranges

Team MUSIC went next and outlined their view of a problem that there are an estimated 64,000 intensive care unit (ICU) patients in the United States at any time. Of these, 15% are in cardiac ICU. It is agreed that echocardiography is a less invasive way to monitor patients, but is not used much outside of the operating room or echo lab. There are current limitations with point of care ultrasound (POCUS). The image quality can be limited due to body habitus. Patients in the ICU may need to be repositioned, may have chest tubes, etc. Furthermore, standard transesophageal echocardiography (TEE) is not always available and requires highly trained staff, repeated insertion with its own risk, and currently there is no POCUS technology for this. Team MUSIC's solution is to develop a mini, disposable 4D TEE as a monitoring device. This will provide a view of the full heart as often as needed. The device will stay in the esophagus over a period of time. It can establish a baseline cardiac function, identify causes of instability, allow for fast treatment, and improve patient outcomes, etc.

The clinician will initially place the 4D TEE, but a robot will help adjust its location over time. The device will then provide a display of the images along with data from electrocardiography (ECG), pulse oximetry, cardiac output, and pulmonary artery catheters (PAC). An archival and retrieval system allows clinicians to review images and data as needed.

> "The hackathon was a great event that allowed experts from a variety of backgrounds to congregate to develop a solution for a clinical problem. The event shows how combining expertise can generate new ideas to create solutions to clinical problems"
>
> Carol Mitchell, PhD, RDMS, RDCS, RVT, RT(R), ACS, FASE, Hackathon Chair

The TEE probe consists of a modified rectangular boundary array transducer which utilizes the elements only on the outer rows and column. This reduces the cost of the probe and allows for straightforward miniaturization. Force and temperature sensors are integrated with the array transducer to ensure adequate coupling and minimize heating concerns. Combination with other devices such as ECG for ejection fraction calculation, pulse oximeter, and pulmonary artery catheters is also possible. The robot has four degrees of freedom and is capable of in-person or remote adjustment of the imaging probe.

The group argued that much of the software is available already commercially like 3D ejection fraction (EF), and left ventricular (LV) volumes, etc. To add onto this, it is possible to build-in programmable alarms on thresholds that the clinician wants which will provide a lot of possibilities and customization. Using fusion imaging with existing chest CT will also assist in positioning, and allow for cross-correlation for abnormal structures via muti-modality approaches.

In summary, this solution is suitable for continuous monitoring, it is reproducible, it is remote operable, and has an ease-of-use factor.

Team Vigilance had the final presentation which they titled, "Improved ICU Monitoring of the Hemodynamically Unstable Patient."

This group briefly summarized the standard noninvasive monitoring available now (blood pressure, heart rate, oximetry, etc.), but stated that a hemodynamically unstable patient will need more detailed information about cardiac function. Pulmonary artery catheterization is helpful but has significant risks and shortcomings. Transthoracic echo image acquisition is an excellent modality for cardiac function assessment, but would require trained sonogra-

phers to be present 24-7 in the intensive care unit (ICU).

Transesophageal echocardiography (TEE) imaging is attractive because the imaging needed for ventricular volumes, cardiac output and ejection fraction can be streamlined for ongoing assessment. Because miniaturized TEE probes can remain in place for up to 72 hours, Team Vigilance believed that with certain innovations, this approach will lead to achieving the goals of this competition, such as ease of implementation, parameter(s) for monitor display, portability, and AI-guidance.

For this solution, Team Vigilance suggested a platform to leverage novel ultrasound technology in the critical care setting with four steps:

1. First, acquire a baseline full TEE echocardiogram. This will provide a data set on which can later run complex artificial intelligence (AI) segmentation and analysis.
2. Then, a mini-TEE probe can be placed and used hourly (or at desired interval). The probe will stay in the esophagus. This probe is based on current technology but with enhancements.
3. Third, the mini-TEE probe can engage an AI-guided platform, based on current technology, so that critical care nurses can collect the images.
4. Finally, there will be AI-based measurements, some which can be displayed on a monitor. Selected video clips will be sent wirelessly to the intensivist through the application.

Baseline data will require a complete 3D TEE. Initial innovation will use current full-size TEE, but eventually employ a mini-TEE probe for continual monitoring with software for multiple probes where each patient can have their own array data set. This mini probe will feature more digital options than are currently available. It also has a mechanical steering setting. The AI will provide probe alignment guidance so a non-expert can manipulate the probe with real-time validation. The technology receives the baseline data and the live 2D data from the mini probe, including the repositioning options (rotation, translation, flexion and image steering). This group also proposed creating the AI by training the network on (many of) the 28 standard TEE views. The data will be local and available to cloud storage systems as well.

After 30 minutes of deliberation, the judges **awarded the win to Team MUSIC with the prize of $500 for each team member.** The judges were impressed with the innovative concept of the disposable TEE and use of array as well as the AI and robot with pressure feedback.

All the teams were congratulated on their novel and inventive ideas, some of which relied on TEE and AI. Judges were also impressed with one team's focus on getting quickly to market as an essential approach, and another team's focus on analysis. The innovative and thoughtful approaches, resulting in great solutions, demonstrated the diversity of team members' experience, background, skills, and geography. The judges noted that comparing very different tools and ideas is a challenge because they all have their own benefits, applications, opportunities.

The teams seemed to like the broad topic approach and also communicated that they learned from their teammates. It was important to communicate the need and conceptualize the problem in both engineering and medical terms. They all had to work around different time zones and it was challenging but fun.

Team MUSIC Hackathon winners shown here in the center Tiffany Chen and Jesse Ton-pin Yen are joined by ASE 2020-2021 President, Ray Stainback (left) and IEEE UFFC-S President, Mark Schafer (right).

AN OUT OF DEPARTMENT EXPERIENCE

FOR YEARS as a cardiac sonographer, I was content to clock in, perform my studies, and clock out. It was seemingly a simple life. The workload I carried was neither too light nor too heavy, I still complained though. But at least I felt as though I was being a benefit to my patients and the facility.

Contributed by ASE Board Member Tony Gallagher, MHA, RDCS (AE, PE), FASE, Baptist Health Lexington, Lexington, KY

Eventually, I became a Clinical Coordinator of Noninvasive Cardiology; in that role I was 50% administrative duties and 50% still performing echoes. Over time, my biggest point of frustration was the continual readjustment of our schedules or procedures due to changes that other departments were making. Essentially, we were the tail of the dog; simply following the decisions of other departments.

Permit me to elaborate on that. One facility that I worked at opened what is known as an Observation Unit. For those who do not know, this is "a well-defined set of clinically appropriate services that includes short-term treatment, assessment, and reassessment before a decision can be made as to whether a patient can be discharged or requires further treatment as an inpatient (American Medical Association, 2016)."1 The issue with these patient types is that everything is time-sensitive, which means that any echocardiographic procedures must be prioritized for discharge. As sonographers, we already had to prioritize stats, critical care units, and pre-surgical studies... now we had to add Observation patients to this list.

As our hospital moved forward with certifications, we continued to experience schedule or procedure changes due to decisions that other departments were making. Next on the list was a Joint Commission Stroke Certification. Let me add that I completely understand the varied hospital certifications, the need for them, and the advantage they provide a facility. However, each one of them seems to directly affect the echo or noninvasive lab, without

getting its input. The Stroke Certification mandated two things that 'again' created echo lab process changes:

1. That each stroke patient receives a bubble study (again, I do not have issue with the procedure).
2. That these patients must be prioritized as stat.

Both of these were reasonable requests that mandated reasonable changes...but from other areas.

There finally came a time where I had reached a point of frustration. Not with my job, or position, but with the fact that echo had no voice in any new certification or process changes/decisions. I sat with my director at that time and explained the situation and asked to be invited to the next certification or re-alignment meeting. The answer that I received was something like, 'you really don't need to be involved, they don't need echo in those meetings.' This was not the answer I wanted to hear. I acknowledged that, yes, they can obtain a certification without us at the meeting, however, many of the decisions they make directly affect our department. So, if we are allowed at the table, we might be able to add insight or input as to how we can best accommodate the patients without frustrating the nursing units, or the echo lab staff.

Next up – Chest Pain certification. Which, as anyone in cardiology knows, you cannot obtain without having echocardiography available. To my surprise, I received an invitation to the meetings. When the meetings started, I sat in there – quietly – with minimal to no input. However, at one point they began to discuss echo; how they could get one, when it would be required, and how to build it into the order sets. This was my opportunity to represent our department and speak up. It ended up that not only was my input beneficial to our own lab, but also to the achievement of the certification. The Chest Pain team also realized that having someone with a fresh or different perspective was beneficial to the process.

There finally came a time where I had reached a point of frustration. Not with my job, or position, but with the fact that echo had no voice in any new certification or process changes/decisions.

Two important changes occurred after that. First, I was immediately better equipped to help our echo lab staff assimilate and accommodate the new directives. Second, the facility saw the benefit of adding an echo representative to these kinds of meetings; so our department began to have increased representation for facility initiatives or certifications.

Is there something to be learned from this? Of course! In light of the increasing volume and variety of certifications and invasive cardiology procedures; echocardiography will be increasingly necessary. Therefore, echo lab leaders should make sure they have a voice in the scheduling process and procedure changes so they can best accommodate staff, patients, and the various specialty certifications. The only way to do this effectively is for YOU to get more involved and start to have more 'Out of Department Experiences.'

Reference

1. American Medical Association. (2016, ND ND). Inpatient versus observation care. Retrieved from AMA Association: https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/about-ama/councils/Council%20Reports/council-on-medical-service/issue-brief-inpatient-v-observation-care.pdf

ECHO

ASE'S MISSION

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