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51 CREATING A "STATE OF THE ART" ECHOCARDIOGRAPHIC CENTER IN LAGOS, NIGERIA

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ABOUT ASE

The American Society of Echocardiography (ASE) is a professional organization of physicians, cardiac sonographers, nurses, and scientists involved in echocardiography, the use of ultrasound to image the heart and cardiovascular system. The Society was founded in 1975 and is the largest international organization for cardiac imaging.

ASE'S MISSION

ASE is committed to excellence in cardiovascular ultrasound and its application to patient care through education, advocacy, research, innovation and service to our members and the public. Our members are the Heart and Circulation Ultrasound Specialists. They use ultrasound to provide an exceptional view of the cardiovascular system to enhance patient care.

COMMENT AND CONTRIBUTE

Like what you read? Have an idea for a future article? We want to hear from you! Email echo@asecho.org.

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"Splash," the photo that graces the cover of this issue of Echo, was taken by Vicente E. Font, MD, FACP, FCCP, FACC.



In this third issue of the *ECHO*, we are taking an in-depth look at the real people behind our membership numbers. We have interviewed our senior leadership and asked them what advice they would give to someone coming into the field, featured the beautiful art and poetry that our members are making when they leave the office, highlighted our members that have been working to bring improved patient care and resources to underserved populations, and focused attention on the growing number of international colleagues that are actively promoting echo around the world.

In addition, to better prepare our members for the future, we continued our focus of offering articles in this publication on practice management issues. In this vein, ASE's investment advisors, who have so ably helped ASE retain and grow its rainy day funds, give their advice on how to prepare for retirement. And, our partners at MedAxiom, who represent over 5,400 cardiologists, focus on mega trends taking place in the healthcare field, allowing you to potentially benchmark against what is happening in other labs. Lastly, as healthcare continues to be so volatile, we offer a snapshot of what questions members have been asking one another in our Connect@ ASE forum – members are helping members navigate the new trends and practice conundrums – in real time!

Thank you for your continued readership and we hope you are enjoying this news source. Let us know if you are receiving the type of information you need-our goal is to help you and provide a resource that resonates with your interests.

oh 2 hleight

Robin Wiegerink, MNPL, ASE's CEO

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table of contents

Focus on Leadership6
At the Heart of Their Art 10
ASE Provides Resources Our Members Can't Live Without
A Guide to Retirement: What to Think About Now
Circle of Giving 18
Leveraging the 2011 Appropriate Use Criteria for Echocardiography to Improve Patient Care
Member Focus: The Image-Poems of Joseph Gascho, MD23
Intersocietal Accreditation Commission Echocardiography Data Reflects a Decade of Change
Industry Trends, Not Federal Legislation, Push Healthcare Forward 30
Overheard on Connect@ASE
New Offerings for FASE
Integrating a Cardiology Private Practice with a Hospital System: Six Tips for Success
Education Corner 42
Get Ready to Toast Portland: Celebrating ASE's 25th Anniversary 46
Thrills and Challenges of Creating a "State of the Art" Echocardiography Center in Lagos, Nigeria
Echo Around the World



ASE'S 2013-2014 EXECUTIVE COMMITTEE RESPONDS



// BENJAMIN F. BYRD III, MD, FASE President

Vanderbilt University Medical Center

As a young person contemplating a career in echocardiography, one may either approach the field as a high-school student or undergraduate considering a career in cardiovascular sonography, or as a young physician somewhere along the long training path that follows four years of medical school.

To the aspiring sonographer, I would say first that this field is one of the most exciting areas imaginable in which to work. It places great responsibility on the sonographer to think independently based on formal training, and to be creative in solving problems in medical diagnosis. One assumes a position of unique importance in helping individuals with very serious health problems. Learning a profession well enough to help others skillfully while being warm and supportive is extremely gratifying. Second, I would advise obtaining the educational training necessary for formal credentialing as a cardiovascular sonographer and plan to sit and pass a registry examination, which confirms expertise in the field and is essential for working in a high-quality, accredited echocardiography laboratory. Finally, the young sonographer must decide whether he/she wants to work in a specific locale, or to pursue the most high-quality practice possible, regardless of locale. If the former, fine; many opportunities are available nationwide in the field. If the latter, asking advice from the head of one's sonographer training program or contacting ASE to speak with Cathy Kerr, ASE's liaison for the Council on Cardiovascular Sonography, may well open the door to surprising opportunities in cardiovascular sonography. Of course, joining ASE is essential for access to superb CME - and to the networking opportunities crucial to professional advancement in a rapidly changing field like cardiovascular ultrasound.

To the post-graduate physician, I would say "Welcome to the greatest field in cardiology! If you want to not only apply but move beyond the diagnostic capabilities provided by your history and physical examination skills – and beyond diagnostic techniques dependent on ionizing radiation or large, immobile, hugely expensive machines, echocardiography is for you!" Remember, it doesn't depend on where you begin training in medicine or cardiology, but where you finish. Make sure hard work, honesty, intelligence, and a spirit of inquiry carry you to the highest point achievable after you finish medical school - and then find an echocardiography program that will provide what you want in subsequent years. Speak with your Training Director at each post-graduate education level to learn of echocardiography programs that fit where you wish to live and the career you desire. If staying in a specific part of the country to practice clinical echocardiography is most important to you, fine. If an academic career is what you want, demonstrate your drive and aptitude by completing one or two projects in any research area during your medical or cardiology training. Next, speak with your Training Director and your hospital's Echo Director to learn of contacts they have around the country in echocardiography research. Look in JASE monthly for the origins of research manuscripts in areas of interest to you - and at the JASE Abstract Issue published each June for the annual ASE Scientific Sessions. Financial support can often be found within the welcoming echo laboratory's division to support a bright research fellow for one or two years - if the ground has been properly tilled through hard work and a letter (and, if possible, a call) of support from one's previous training program.

Best of luck to all those fortunate enough to recognize the tremendous opportunities in the field of echocardiography!



// NEIL J. WEISSMAN, MD, FASE President-Elect

MedStar Research Institute, Washington Hospital Center One of the great things about cardiovascular ultrasound is that we live in both "today and tomorrow." Echocardiography is the mainstay of imaging for cardiovascular care. There is virtually no area of cardiology that can provide quality care without the integration of information obtained from echo. While our field enjoys being at the heart of diagnostic information that guides therapy, it also is dynamic with ongoing improvements and new technologies. This is an exciting time for someone to be entering the field.

FOCUS ON LEADERSHIP



// SUSAN E. WIEGERS, MD, FASE Vice President

Temple University School of Medicine

Collaboration is the key element to a successful career in echocardiography. We are part of an inter-professional team in caring for patients. Being an expert in echocardiography requires us to understand the roles and value the input of all of our colleagues – not just sonographers and nurses in our labs but other cardiology colleagues, cardiothoracic anesthesiologists, pediatric cardiologists, surgeons, critical care doctors, ER physicians, radiologists, etc. I say "etc." as a way of acknowledging that I am likely to leave off a key group that I will recognize as soon as I see this article in print. The exciting moment in clinical echo is providing that answer to the whole team – the "aha" moment when we all arrive at the same understanding of the patient's clinical course with the goal of improving it. And again, we need our team of colleagues to succeed.

Similarly, research in echocardiography and cardiac imaging almost always requires collaboration with other fields. It is important to read widely and stay open to key clinical and research questions in other fields besides one's own. Keeping up with the new techniques and literature is essential (3D, fusion imaging, strain and torsion, "etc."). Echocardiographic techniques and assessment can enrich other fields and provide answers to research questions that were not necessarily originated by cardiologists but by oncologists, primary care doctors, nephrologists, "etc." As "Interprofessional Collaboration" is added to the core competencies for undergraduate and graduate medical training, the field of echo is already a fine example of the very valuable clinical care and research such collaboration can produce.



// SHERIF F. NAGUEH, MD, FASE Treasurer

Houston Methodist DeBakey Heart & Vascular Center My advice to a physician beginning his or her career in echocardiography is to work to attain the highest level of competence and knowledge in technical and interpretation aspects of imaging. This can only happen through ongoing education and training under the guidance of experienced echocardiographers. Understanding the technical aspects well is essential for helping others, be it sonographers or other physicians. It is essential to pay attention to details as these can make a major difference in interpretation. I would encourage echocardiographers to maintain good lines of communication between themselves and the referring physicians. This will allow for better patient care and can facilitate educating the referring physicians about the Appropriate Use Criteria and the type of test that is likely to provide the most information in a given clinical scenario. I also believe physicians should show their competence and distinguish themselves by taking and passing the National Board of Echocardiography examination. Being a member of the ASE and actively participating in its activities is another helpful step, as ASE has several forums that bring together the different communities that care about cardiac ultrasound and can expose many beginners to help and advice from its senior members. Finally, stay up to date with the field. Reading JASE, attending ASE live courses, and participating in the annual Scientific Sessions are great ways to achieve this.



// KENNETH D. HORTON, RCS, RDCS, FASE Secretary

Intermountain Healthcare

I would advise someone just entering the sonography field to take the first one to two years of your career and solidify the skills you learned during school. Spend those early years refining the basics. Those seemingly "routine" studies you do the first one to two years, like the routine transthoracic echoes, stress echoes, or assisting with transesophageal echoes, may seem boring but they really are building the foundation for the rest of your career. The field of echocardiography is expanding rapidly with sonographers finding themselves in new places like the operating room or hybrid cath labs. Those first few years of learning the basics will prepare you for more advanced assignments and responsibilities. Once you have mastered the basics, be proactive about getting involved in other areas.

Be sure you get credentialed as a cardiac sonographer. Many institutions require this before they will hire you. Being a credentialed cardiac sonographer demonstrates that you possess the knowledge of an entry-level sonographer. This is the first thing a lot of employers look for when they are reviewing applications for employment.

Never stop learning. First of all it is a requirement for maintaining your credential, but beyond that, it makes you more proficient at what you do. Continuing education is a way to keep your mind challenged and your skill stateof-the-art. Attend classes, webinars, read, and practice those new techniques. Consider continuing or going back to school for the next level degree. The Advanced Cardiac Sonographer initiative is going to provide that "next step" on the sonographer's career ladder.

Lastly, join a professional society. And do it early, i.e. as a student. Professional societies help you accomplish all the above. They provide you with a networking system to ask questions and provide ideas. Some of my closest friends I have I met through my association with ASE. Being involved in a professional society provides you with personal satisfaction and is a way of "giving back."



//JOE KREEGER, RCCS, RDCS, FASE Member-at-Large

Children's Healthcare of Atlanta My first piece of advice for those just starting out would be for one to attend a cardiovascular sonography program that is CAAHEP accredited (go to www.caahep.org for more

information). Attending an accredited program provides a direct route to becoming credentialed in cardiovascular sonography. Also, "broaden your horizons:" consider making yourself more marketable by learning multiple specialties, such as vascular and pediatrics. Next, become a mentor. Our field is growing tremendously with many new sonography professionals, some of which have limited access to a clinical rotation. Another rewarding activity is to become involved with a local echocardiography society and be an advocate for the profession. There are many changes coming about in our field and being an advocate helps provide a larger "voice" for our profession. Attending the ASE Scientific Sessions is another piece of advice I give. It is a great way to get to know your council representatives as well as learn about cuttingedge practice and technology and most current issues in our profession. Lastly, don't hesitate to communicate your desire to be involved in voluntary work with ASE with standing council. chairs, council members, or council liaisons.



// PATRICIA A. PELLIKKA, MD, FASE **Immediate Past President** Mayo Clinic

I would encourage one who is entering cardiology to strongly consider a career at an academic institution and to become an expert in some area of the field. Cardiology is a very broad, highly specialized, and rapidly changing field. The opportunity to regularly interact with house staff will keep you engaged, interested, and current with new developments. Selecting a focus for your special attention will enhance your career satisfaction. Read deeply in this area, be willing to review manuscripts, seek opportunities to expand the knowledge base by recruiting patients for multicenter studies or designing your own studies, and volunteer to share your expertise. You will enjoy serving as a resource for your colleagues and patients as your advanced expertise and knowledge will enable you to provide new insights into complex issues. 🎔

ECHO /// 9

ATTHEHEART OFTHEIRART

Contributed by Deborah R. Meyer, ASE, JASE Managing Editor

10 /// At The Heart of Their Art

ASE ran a cover art competition this summer for this issue of Echo magazine. We received a number of entries and were pleased to see how creative and well-rounded our members are!

On the cover!

Vicente E. Font, MD, FACP, FCCP, FACC won for his photograph, "Splash," and Keri O'Farrell, RDMS took second place for her oil pastel, "I heart Echo."

We caught up with these ASE members to learn more about them.

THE CAMERA AS A FIFTH LIMB

Vicente E. Font grew up in San Juan, Puerto Rico and so did his wife.

"We met in high school and have been together ever since," Font said.

The pair has three children, a girl who is 20, and two boys, aged 16 and 13.

Font went to medical school at the Universidad Central Del Caribe School of Medicine, Puerto Rico. Then he and his wife moved to Cleveland, Ohio where Font completed a residency in internal medicine and a cardiology fellowship at The Cleveland Clinic Foundation.

"When we visited Puerto Rico to see family, we wanted to take good pictures and bring good memories back to Cleveland that we could enjoy," Font said. "I started getting into reading and studying photography and getting my equipment."

Font is now a non-invasive cardiologist with a special interest in cardiac sonography and practices at Cardiology Associates of Fort Lauderdale/Holy Cross Medical Group in Fort Lauderdale, Florida. He is also a Colonel in the U.S. Army Reserve.

In 2009, he returned from serving in Iraq. "When I came back from the Middle East, I wanted a hobby to invest my time in," Font said. So he registered to take photography classes at the Boca Raton Museum of Art, near his home in Pompano Beach.

"That is where I started paying attention to fine art photography and playing with still life photography," said Font, who took great pleasure in completing the homework projects, such as taking photos that emphasized architecture and landscapes. "During the classes, everyone would share their work. You learn that way, by listening to criticism." Font rarely goes beyond sharing his photographs with family and some friends, but a few years ago he submitted some work to a U.S. Army digital photography competition. He won third in the still-life category and got an honorable mention in the animal category in this world-wide challenge.

"I think that there are a lot of things in normal life that you walk by and you are not appreciating, like perhaps an angle on something. I have learned to appreciate certain lights, reflections, and shadows that people don't normally pay attention to. Photography has helped open my mind and helped me be more creative," Font said.

The cover photo, "Splash" is the result of more than 100 shots Font took one afternoon. He got the idea to set up the shot from the Internet.

"Splash" was taken with a high shutter speed. Font was trying to catch the exact moment when a drop of milk bounced off the liquid in a plate, in this case, ink. It was not taken specifically for the cover image competition but Font chose it from his portfolio. "I thought there was some association with echo because of the ripples," Font said.

From the moment he was introduced to echocardiography, Font was smitten. "I had fantastic teachers during my fellowship in cardiology at The Cleveland Clinic Foundation, including Ernie Salcedo, Bill Stewart, and Jim Thomas, to name a few," Font said. What impacted him the most was the ability to see a moving heart on a television screen and have live information at his fingertips. The visibility of the test without it being invasive or needing a special x-ray room also spoke to him. Whenever Font had a chance to do echos by himself, he seized the opportunity. Font remains captivated by his field and like his photography, keeps on learning.

AT THE HEART OF THEIR ART cont.

I HEART ECHO

Everyone needs to have a mother like Keri O'Farrell.

O'Farrell has spent a lifetime drawing. "My mother is an artist, and she has always encouraged this ability in me," O'Farrell said.

"One of the things that I love about my mom is that no matter what I am doing, she was and is always there and is all for whatever I am doing," O'Farrell said.

And in O'Farrell's case, this is a lot of things, whether it is making art, boxing, snow shoeing, playing the drums, or long-distance running.

When she learned about the cover art competition, she turned to one of her many talents, drawing, and created her oil pastel piece, "I heart Echo." She employs a wide range of media in her artistic endeavors but chose oil pastels this time as they are easily manipulated yet create crisp lines. "Watercolors are pretty tough and charcoal is nice but you have to be careful with it. On the fly, I wanted to use oil pastels," said O'Farrell, who created her bold and beautiful heart in under an hour.

The title of the piece succinctly sums up what O'Farrell feels every day as she rises and heads to work. Discovering echocardiography provided her with a passion for her professional life.

O'Farrell is a sonographer at the University of Arizona Medical Center in Tucson in an echo lab with IAC Echocardiography accreditation. Her responsibilities include 2-D, M-Mode echocardiograms, and transesophageal echocardiograms.

In 2006, O'Farrell moved to Tucson. "There was a coach down here who had been in the 1968 Olympics that I wanted to run with to get faster times," said O'Farrell, who has competed in the Boston, New York, Chicago, and Tucson Marathons in addition to her absolute favorite, Grandma's Marathon, held in her hometown of Duluth, Minnesota.

As she began her new running career in Tucson, O'Farrell was working at UPS and at St. Joseph's Hospital as a nursing assistant thinking she might want to go to nursing school but she wasn't sure. "Then one day this guy Moses comes down the hallway with an echo machine. He was going into the room of the patient I was helping," O'Farrell said. "When he put that probe on the man's chest, the clouds broke, the angels sang. When you know something, you know. When I saw that man's heart on the screen, I swear, the angels really were singing. I knew it was what I wanted to do the rest of my life." O'Farrell turned to Moses and said, "What do I need to do so I can do what you do?" Moses, who was a sonographer, made a phone call to the Keith Mauney Ultrasound Training Institute in Irving, Texas on O'Farrell's behalf, and though the program was full, they made room for her. O'Farrell set out to read up on cardiology.

"I went online to find books on echo and Moses said that Dr. Feigenbaum was always good to read so I got his book, "Echocardiography" and read it like a ravenous child. I just wanted more and more and more. Anytime I got a chance, I would order the newest ASE book on echo. I continuously work at being a better sonographer," O'Farrell said.

Like Font, O'Farrell remains captivated by echocardiography. She said, "Every time you go into a patient's room and use the wand, it is like a little mystery. You have to hunt and dig and look and make sure you are helping them. Every heart is different. It is like a snowflake. The same, but intricately different." •

"I heart Echo." by Keri O'Farrell, RDMS



Are you are getting the **MOST** out of your ASE membership?

"ASE is a tremendous resource for the busy echocardiographer. From online CME to discounts for live meetings and guidelines posters, a membership in ASE more than pays for itself year in and year out."

James Thomas, MD, FASE, Past President, American Society of Echocardiography - Moore Chair in Cardiovascular Imaging, Department of Cardiovascular Medicine, Heart and Vascular Institute, Cleveland Clinic

Protect the value of Echo

ASE is the only organization solely dedicated to fighting for the value of echo and for licensure issues on your behalf. ASE works diligently to be the voice for echocardiography on Capitol Hill, to federal agencies, and to private payers. Changing policies and regulations will impact you; ASE translates this information into knowledge you can use. There are a variety of ways to be informed and engage.

Advocacy alerts are available on the advocacy section of our website, the ASE Advocacy blog, and in regular newsletters.

ASE's practice management page includes links to expert information including the ASE coding expert and discusses topics in more depth. *The Health Affairs* blog discusses the latest health reform news.

JASE - a "Top Ten Essential Journal for Cardiologists"

For information, news, tools and, increasingly, patient health records, a considerable 81% of U.S. physicians went to websites targeted to healthcare professionals in Q1 2012, according to a study by comScore, a leading internet technology company that provides "Analytics for a Digital World." ASE wants to make sure that you always have the information you need. *JASE* is now more portable to fit the way you access information. *JASE* online allows you to see articles in press, download and print PDFs, and search back issues. You asked for iPad access and ASE has delivered. *JASE* is now easier for you to access than ever. With more submissions and a rising impact factor, this essential publication is more indispensable than ever.

"In this highly dynamic world of cardiac imaging, it is extremely difficult to keep pace with the advancements in science. ASE membership does exactly that for me - provides excellent learning opportunities, helps me stay abreast with the latest in echocardiography, and lets me know what my peers are doing across the world."

Manish Bansal, MD, DNB, FASE - Senior Consultant Cardiology, Medanta – The Medicity, Gurgaon, Haryana, India

You need EDUCATION. We have it for you. For FREE

On our brand-new online education site ASEUniversity, you can access over \$400 of free Category 1 CME anytime and anywhere. ASEUniversity hosts a variety of webinars and *JASE* CME. We even record our live webinars so you can watch them at your convenience. In addition, since 2011, ASE has reported your credits to the American Registry for Diagnostic Medical Sonography (ARDMS) and Cardiovascular Credentialing International (CCI). Education your way and on your terms.

"Our members access free education, automatic reporting of credits to credentialing authorities, a robust online networking community, and a great group of professionals that work very hard to support one another. It is the best membership value out there."

David Adams, RCS, RDCS, FASE - Technical Director for Echo Development, Duke University, Durham, NC

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a guide to RETIREMENT: What to Think About Nom

By Thomas A. Foglia, CPA and Sam Paglioni, CIMA®

Retirement is the ultimate reward for a lifetime of hard work, savings, and investing. Unfortunately, too many people today are unable to set anything aside for their retirement as the price of living continues to rise.

In a survey released in March of this year by the Employee Benefit Research Institute, the cost of living and day-to-day expenses head the list of reasons why workers do not contribute (or contribute more) to their employer's plan, with 41 percent of eligible workers citing this factor. The study also reveals that 28 percent of respondents are not confident that they will have enough money to retire. While more than half suggest some level of confidence, these levels have not appreciably changed in two years.



We could spend an entire article on why people need to make the sacrifice to put money away for retirement. Graphs and charts abound on issues such as longevity, the benefits of saving early, and the need for a well-diversified portfolio. The pressure to set aside something for later years often becomes more pronounced as many people start their retirement savings plan later in life. And, particularly for those in the healthcare field that have extended training beyond college, this becomes a heightened issue.

The focus of this article is to highlight some simple "guide points" to taking control of your investments, especially in the 401(k)/403(b) plans that serve as the primary vehicle for most working Americans. Our "guide points" are simple to understand and easy to implement. They are what we use to help manage over \$200 million dollars of client assets in our private wealth practice. Provided below are five broad guide points for consideration:

- Fear and Greed
- **2** Understand your investments
- 3 Control only that which you can control
 - a. The amount of time to invest
 - **b.** The amount of risk to take
 - c. The cost of your investments
- 4 Avoid timing the market
- 5 Think long term

/// YOUR SILENT PARTNERS

Meet Mr. Fear and Mr. Greed, the two silent partners that can derail the best laid investment plans. It is important that investors learn to identify and control these two competing forces. Fear can cause investors to make irrational decisions as many people did in March of 2009 when the Dow fell to 6600 after recording a high in 2007. Failing to control their fear, many investors "swore off" the stock market for good and moved to the "safety" of Treasury bonds. That move caused those investors to miss one of the great stock rallies of the past 30 years while locking in losses as Treasury bonds ultimately fell in value.

Greed, on the other hand, causes irrational decision making in the other direction by causing investors to suspend rational thought about what makes a proper investment. This was most evident during the 1999-2000 technology bubble when the tech market doubled in value inside of six months. Initial Public Offerings (IPO's) were all the rage and the new technology darlings were "can't miss" (or "sure thing") investments. Wall Street analysts were touting new paradigms where "eyeballs" replaced "earnings." Tech stocks, the modern day Sirens of Greek mythology, led many greedy investors to their doom.

As an investor it is important that you identify these two silent partners and learn to control them. Once under control you can make rational judgments about your investments and how to properly structure a diversified portfolio.

/// UNDERSTAND YOUR INVESTMENTS

Controlling your silent partners is important, but you need to understand *what* you are investing in for the long run. Most investors' primary retirement assets are in their company's retirement plan where some of the investments can be quite hard to analyze. Most of these plans invest using mutual funds, so a good place to start is with the prospectus of the mutual fund. This is a document that outlines who is managing the fund, what stocks and bonds they look to invest in, if they invest solely in the United States or across the globe, and many more pertinent pieces of information. If you are investing by yourself in stocks, you have to do a great deal more research to make sure you organize a diversified portfolio of securities. The Internet provides a lot of information about investing; but exercise caution as there are a lot of people that are trying to push investors in one direction to support their claims. If you are new to investing, stick with well established mutual funds that have reasonable expenses and good management.

a guide to RETIREMENT: What to Think About Nom

cont.

/// CONTROL WHAT YOU CAN CONTROL

Over our 20-year career in the industry, we have identified the three areas an investor actually has control over:

1 The amount of risk they wish to take

2 The amount of time they need to invest

3 The amount of fees they are willing to pay

Risk comes in a lot of different "flavors." Risk of pure loss (fear) and opportunity loss (greed) are the two most common. Therefore, it is important to determine how much risk is needed in a portfolio to meet future goals. This is accomplished by diversification of a portfolio – a way to divide up your investments between stocks, bonds, and cash.

The amount of time you have to invest is a function of the goal you are planning to achieve. Retirement is a "squishy" goal, but everyone knows it is out there. Saving for a down payment on a home is another goal that would require a different investment approach and time period. So the prudent investor needs to manage investments to the time horizon of the particular goal. In summary, one with a longer time horizon may be able to tolerate more portfolio risk.

The final element you control is expenses. This is an important item any investor can understand, yet so many miss this opportunity to improve their investment returns. Most investors save through their company 401(k) plans, most do not think about the amount of money they are paying to participate, assuming the company is taking care of providing them with the best plan and investment choices available.

We have seen retirement plan expenses topping 2-3%, when the "going rate" today is more like 1%. Imagine saving 1-2% every year for the next 20 years! But what can you do to understand the fees you are paying? There are a couple simple steps to take:

If investing outside of a company sponsored retirement plan, stick with low-cost mutual funds from providers such as Vanguard or Fidelity.

If investing inside of a company 401(k) plan, ask your HR director for information about the plan's expenses. New regulations require fee disclosures to be provided to you (called 404(a)-5 fee disclosures).

3 Ask your HR Director how long ago the company's plan was reviewed for a potential change of record-keeper and Administrator. New plan features and low-cost funds have flooded the retirement market making plans more efficient for participants.

/// AVOID MARKET TIMING

Every portfolio starts with an asset allocation that reflects the "fear/greed" or "risk/reward" position of the investor. Over time, due to market actions, a portfolio needs to be re-balanced. In a bullish market, equities grow faster than bonds; while in a bearish market, equities will lose value faster than bonds (which may even advance in value). Both situations can require an investor to rebalance a portfolio. What you want to avoid is "timing the market," or making guesses about when to get out of or get into a particular asset class.

Despite what you may read or hear it is impossible to consistently "time" the market. The best approach you can make is to determine your "risk/reward" based on the savings goal (i.e. retirement) and design your portfolio to meet that goal. At periodic points, which may be quarterly, semi-annually, or annually, you can rebalance the portfolio back to some pre-defined strategic allocation that makes sense for you.

/// THINK LONG TERM

Finally, since most investing is geared to retirement, the last topic is the concept of "long term" investing. The greatest investor of our generation, Warren Buffett, thinks in this fashion, paying little heed to the daily market gyrations. His approach is to buy good quality companies and hold them for a long period of time. Mr. Buffett has a very well-defined sense of risk and reward.

Investing, in the sports vernacular, is a "marathon not a sprint." We suggest that you set your goals, define your risk/reward tolerance, and assemble a low-cost portfolio of good quality mutual funds for your investments. If you are investing for retirement in a 401(k) plan, make sure you know the fees you are paying and pay attention to those announcements about the plan from HR, especially the ones about fees! •

Foglia and Paglioni are the Principals of Integer Wealth Advisors Group, LLC, a private wealth management firm for individuals and institutions. They have managed investment funds for the ASE and ASEF since 2005. Tom and Sam can be reached through their website at www.integerwealth.com.

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Circle GIVING

A Profile of Jose Banchs, MD, FASE

Jose Banchs, MD, FASE, is a new member of the ASE Foundation Task Force for 2013, but when it comes to soliciting money for the Foundation, he should have no problem. After all, Dr. Banchs knows first-hand the value of funding philanthropic efforts – he is both a receiver and donor of Foundation funding.

EF

VE

In April 2013, Dr. Banchs and a courageous group of volunteers traveled to Hue, Vietnam. Dr. Banchs led the charge, submitting a formal proposal to ASE for a mission to Hue, a city that boasts a top cardiology and cardiac surgery center yet serves a population of 13 million people in an area where rheumatic heart disease is still endemic. The group's mission was simple: help expedite cardiac care through the use of portable, handheld echocardiography. Through ASE Foundation funding earmarked for philanthropic missions, travel and accommodation support was provided for the group of volunteers. Dr. Banchs and his crew were able to scan over 200 patients in three different outreach clinics over two days in Hue.

Humanitarian missions, like the one in Vietnam, are just one of the initiatives the Foundation supports through funding. It was an experience that changed Dr. Banchs both personally and professionally. "It makes you appreciate all we have and may take for granted," says Banchs. "It is very humbling to see how other physicians do so much with so much less than we have here in the U.S. I recommend the experience to anyone."

Contributed by Kelly Sweet, Foundation Coordinator

In 2012, drawn by a sense of responsibility to give to his imaging subspecialty, Dr. Banchs became a lead investor – the highest giving level – of the ASE Foundation's 2012 Annual Appeal.

"Giving back is important to all; it's literally making a gift appear," says Banchs. "I can only wish that I have as much charitable outreach as others had towards me."

As an ASEF Task Force member, Dr. Banchs is now doing his part to ensure that others are aware of the importance of giving back. One of his roles on the Task Force is reaching out to ASE members to explain why individual donations are needed and the good works accomplished through those funds.

"I will try hard to get them to understand giving is receiving," says Banchs. "We already see so much being done with these funds; the Foundation has a consistent long history of funding that promotes quality research, travel grants & scholarships, guideline-based projects, and now recently echo-based medical missions. It is clear that we all should try our best to help keep all this essential work well-funded." •

1/Dr. Banchs and volunteers joined by a group of Hue Central Hospital physicians.
2/A patient is screened at the clinic in Vietnam while others wait patiently. Transportation into the city for medical care is expensive making the outreach clinics extremely important.
3/After a successful mission, Dr. Banchs and volunteers stand outside one of the outreach clinics in Vietnam.
4/Dr. Banchs reads the echo performed by Liza Sanchez, RCS, FASE at the clinic.
5/Patients gather under a makeshift tent in front of the village clinic, are triaged according to predominant symptoms.

Leveraging the 2011 Appropriate Use Criteria for Echocardiography to Improve Patient Care

ECHO recently interviewed Patrick Hughes, MD, FACC, Assistant Professor of Medicine at the University of Wisconsin School of Medicine and Public Health, to learn how the UW Division of CV Medicine and the Adult Echocardiography Laboratory have helped referring physicians identify patients most likely to benefit from stress echocardiography.

In 2011, ASE and the American College of Cardiology (ACC) published a revised version of the Appropriate Use Criteria (AUC) for Echocardiography (J Am Soc Echocardiogr.2011;24:229-267). In addition, the Intersocietal Accreditation Commission (IAC) for Echocardiography now requires annual measurement of how well individual echo labs adhere to the AUC. IAC Echocardiography's guality improvement measures also include the statement that, "There must be a mechanism for educating referring physicians to improve appropriate use." In an interview with ASE, Dr. Hughes shared his lab's positive experiences from measuring adherence to the AUC for echocardiography, as well as a tool developed by the UW echo lab to enhance decision making when evaluating patients who may benefit from stress testing in general.

Your practice recently measured how well the physicians and non-physician providers adhere to the 2011 AUC for Echocardiography. Could you briefly explain your methods?

We collected data prospectively in our echo lab for 190 patients in December 2012 and early January of

2013. Cardiology fellows and attending staff reviewed the electronic medical record to determine the reason each study was obtained. We then referred to tables in the *2011 Appropriate Use Criteria for Echocardiography* to assign an "appropriate use score." AUC scores of "appropriate," "uncertain," or "inappropriate," were assigned for 100 consecutive stress echocardiograms (SE), 30 consecutive outpatient transthoracic echocardiograms (TTE), 30 consecutive inpatient TTEs, and 30 consecutive transesophageal (TEE) exams.

The number of exams you reviewed is significantly more than required for IAC accreditation. Why?

In March of 2011, I assigned AUC scores for all the studies that I read in our echo lab that month. That preliminary survey indicated that our largest opportunities for improved adherence to the AUC would be for SEs and outpatient TTEs. For our most recent survey we decided to review an extra 70 SEs and twice the required number of TTEs. We felt that doing so would help us drill down to the specific clinical circumstances where overuse of echocardiography in our practice was most likely.



That makes sense. I'm getting the impression that you've done this before.

Yes, we did a similar analysis of how well our practice adhered to the AUC for stress tests with nuclear imaging in 2008. Our initial survey of 387 patients demonstrated that nearly 1/3 studies were done in clinical circumstances in which the stress test results would rarely be expected to impact patient management. Our subsequent efforts to educate referring physicians were so successful that the rate of overuse of stress nuclear exams has been well under 10% for the last 3 years.

What were some of your specific findings from the survey of your echo lab's adherence to the AUC in 2012?

There was good news and bad news. The good news - In our analysis of TTEs, the clinical indications listed for 93% of the exams met the AUC. All (100%) of the TEEs in this survey were performed in clinical circumstances for which TEE is typically useful for patient management. SE was the modality that stood out. In our survey of over 100 consecutive exams, 1 in 5 stress echoes were performed in situations where the information obtained would rarely be useful for patient management.

How did you respond to this data about overuse of stress echo in your practice?

We sent a letter by email to all providers who refer patients to our echo lab. It was accompanied by an algorithm to help guide decision making in the single setting that accounts for most of the overuse of stress echo in our survey: evaluation of the patient with symptoms suggesting coronary artery disease, but with a low pretest probability. We encouraged people to download a copy of this algorithm to their smart phones and the desktop of their computers.

We also included a similar algorithm for stress tests and the asymptomatic patient, a list of the circumstances where stress tests rarely prove useful for patient management and suggestions for those patients to consider for an ECG treadmill test, without imaging.

What has been the response from your referring physicians?

It's been very positive, especially from the people in training. They genuinely appreciate concrete, clear and concise advice.

Can ASE members have access to the algorithms for stress test selection that the UW has developed?

Certainly. A copy of both algorithms is included in this article, and a downloadable copy has been posted to the open forum of Connect@ASE <u>(connect.asecho.org)</u>. We would like to encourage other ASE members to use and share the algorithms.

What's next?

Another analysis of our adherence to AUC for echocardiography is planned for later this year. We plan to share those results with our referring physicians when they become available.

Please let us know how this quality improvement initiative goes.

As we say in the upper Midwest, you betcha! 🎔

See following page for when and how to order different types of stress tests.

Guide to ordering stress tests for the SYMPTOMATIC patient with suspected coronary artery disease (CAD).

1 Determine the nature of the chest pain.

Angina As Defined By ACC/AHA Guidelines

Typical Angina

Probable/Atypical Angina

Midsternal discomfort that is Provoked by exertion or emotional distress and Relieved by rest and/or nitroglycerin Lacks one of the 3 characteristics of typical angina (The best characterization for exertional dyspnea is 'probable angina')

Nonspecific or Nonanginal Chest Discomfort Has only one or none of the 3

Has only one or none of the 3 characteristics of Typical Angina

2 Use these tables to estimate the probability of obstructive coronary artery disease, expressed as a percentage. (For example, a 55 y/o man with typical angina has a 77% chance of having obstructive CAD by angiography. A 66 y/o woman with nonspecific discomfort has only a 17% chance of obstructive CAD).

	Men			Women		
Age (years)	Non-specific chest pain	Atypical chest pain	Typical chest pain	Non-specific chest pain	Atypical chest pain	Typical chest pain
30-39	17.7	28.9	59.1	5.3	9.6	27.5
40-49	24.8	38.4	68.9	8.0	14.0	36.7
50-59	33.6	48.9	77.3	11.7	20.0	47.1
60-69	43.7	59.4	83.9	16.9	27.7	57.7

A more precise online version of the CAD Consortium 1 risk calculator is also available at http://rcc.simpal.com/Directory.

Graham, I.M.; Eur Heart J (2011) 32, 1311-1312. Republished by permission of the European Society of Cardiology

Use these rules of thumb and the probability from the table above to help determine the need for a stress test. *High probability (>70%)* = start treatment and consult a cardiologist.

Intermediate probability (10%-70%) = stress test indicated and is of value. If the ECG is normal and the patient can exercise, consider starting with an ECG treadmill test.

Low probability (5%-10%) = a stress test would rarely be useful for management. Consider carefully the information you will receive from the test.

Very low probability (<5%) = stress test not indicated.

Guide for ordering stress tests for the ASYMPTOMATIC patient with no known history of coronary artery disease.

1 Use the Framingham Risk Calculator

(http://cvdrisk.nhlbi.nih.gov/calculator.asp) to estimate the 10 year probability of myocardial infarction.

2 Use these rules of thumb and the probability just calculated to help determine the need for a stress test. *Intermediate to high probability (>10%)* = The same treatments used for secondary prevention of CAD may already be indicated. The value of stress testing in this circumstance is considered uncertain. A stress test may be useful if the outcome will change management. If the ECG is normal and the patient can exercise, consider starting with an ECG treadmill test.

Low probability (5-10%) = a stress test would rarely be useful for management. Consider carefully the information you will receive from the test.

Very low probability (<5%) = stress test not indicated

Other circumstances where a stress test is RARELY HELPFUL.

Prior to low risk surgery, prior to nonvascular surgery and able to walk 2 blocks and climb 1 flight of stairs, < 2 years since the last stress test with no changes in symptoms, < 2 years since coronary angioplasty or < 5 years since coronary bypass surgery and asymptomatic.

When to consider an ECG TREADMILL TEST.

A man < 40 or a woman < 60 and able to exercise and no history of CAD and a normal ECG.

MEMBER FOCUS: **POEMS OF JOSEPH GASCHO, MD**.

Contributed by Deborah R. Meyer, ASE, Managing Editor of JASE

ASE member Joseph Gascho, MD, is a cardiologist at Penn State Hershey Medical Center and a member of its Department of Medicine. "I am a non-invasive cardiologist and spend a considerable portion of my time reading echocardiograms," Gascho said.

Two other facets of Gascho's life are writing poetry and taking photographs. His poetry has been published in journals including the Annals of Internal Medicine and the Canadian Medical Association Journal. His photos of his patients have graced the cover of the Annals of Internal Medicine a dozen times. At some point, Gascho became interested in combining his two artistic pursuits and began creating imagepoems. Some of these images are from echocardiograms.

"The focus of the poems, associated with echo images, is generally on the human side of medicine - my ruminations in the form of poems about what the patient whose echo I am reading might be thinking, what he or she doesn't know that might be either beneficial to know or good that they don't know, what I would be thinking were this my echo and the symptoms I had prior to the echo being performed," Gascho said. His poems cover a range of diagnoses and medical situations, including heart murmurs, ventricular septal defects, atrial fibrillation, hypertrophic obstructive cardiomyopathy, myocardial infarction, and S/P heart transplants.

Most recently, Gascho exhibited 30 of his image-poems at Gardner-Webb University in Boiling Springs, North Carolina. When an art gallery was opened at the University's new student center, James W. Thomas, Dean of the School of Performing and Visual Arts, immediately decided to invite Gascho to exhibit his image-poems. "I know Dr. Gascho in two ways. He is my cardiologist. My wife teaches creative writing at Penn State College of Medicine and knew him as well and we have become good friends," said Thomas. "People were entranced by both the images and the poetry, but even if you look at the poetry without the images, he has such a keen sense of observation. He is not hampered by what I call 'artistic obscurity.' His work is clear. We had people who were so touched by his work that they were moved to tears."

One of Gascho's recent image-poems is "The silence of the heart." It reads, "You'd think you'd hear/some sound--/a whoop of joy/for every hundred/ barrels of blood/pumped out,/a grunt or two/now and then/from opening up the valves/with every beat./You never do./Not even/when it breaks." The words are coupled with color Doppler images showing the sequence of blood flowing from the left atrium into the left ventricle, and then being pumped out of the left ventricle. "The concept of this poem refers to grief that one can't talk about or doesn't have the words for or does not feel others will understand," Gascho said.

"I think that many times in medicine, our spectrum is limited to talking to someone, hearing their symptoms and examining them. To me poetry and photography expand the spectrum," Gascho said. "Writing poetry and linking it with images helps me take better care of patients. It brings about a more complete care of the patient. You can't show this by outcomes-based research."

More of Gascho's work can be found at **www.jgascho.com. ♥**



32F, PALPITATIONS

You think this flopping and flipping is your heart about to break, that you will drop like your father did at 45.

What we worry about is the aching chest, angina pain.

We like echoes like yours: "All chambers normal in size and function;" "No significant valvar stenoses or insufficiencies."

But tonight awake in my bed when the wall clock tolls two some demon may jump from my breast bone to my Adam's apple and beat his drums wildly,

and I will think this surely is the end.

(By Joseph Gascho)

Intersocietal Accreditation Commission Echocardiography

data reflects a decade of change

Contributed by Beverly L. Gorman, RDCS, IAC Echocardiography Director of Accreditation

In concert with its mission of "*Improving Health Care Through Accreditation*," IAC Echocardiography's primary purpose has and always will be to provide a method for health care suppliers to document the quality of care provided to patients. However, by collecting the information required to assess that quality, IAC possesses the largest repository of data for echocardiography facilities in the U.S. and is therefore able to serve a secondary role of examining and documenting trends in the field.

As the IAC accreditation program is designed to apply to all settings where echocardiography procedures are performed and interpreted, from large university-based medical centers to small, one practitioner private offices, the standards and guidelines set forth outline minimal levels of quality, with accreditation being granted to facilities found to be in substantial compliance. Often, it is the *IAC Standards* that drive change throughout the field but there are also instances where the IAC makes adjustments to ensure that the program is reflective of both practice and technological advancements. This article will explore the significant changes to the *Standards* and the accreditation process and how those have impacted trends throughout the field, as well as changes incorporated by the IAC to reflect shifts occurring in echocardiography.

The Field of Echocardiography Shows a Progressively Strong Commitment to Embracing the Concept of Accreditation

During the past decade, a significant increase in the number of facilities participating in the accreditation process has been driven by several factors. Support by the sponsoring organizations, including the ASE, has contributed to broad acceptance by the echocardiography community. Furthermore, health care suppliers' desire to document their quality to both referring physicians and health care consumers and to be in compliance with payment policies have been strong drivers.

In 2003, 623 adult facilities and 14 pediatric facilities, for a total of 901 sites, were accredited by the IAC Echocardiography (formerly ICAEL). These numbers have steadily increased and as of mid-2013, more than 3,100 echocardiography facilities were accredited at one or more facility locations for a total of 4,900 sites **[Table 1]**. It is expected that the number of sites will continue to increase as more facilities discover the value of accreditation and new payment policies with links to accreditation and reimbursement are adopted for echocardiography.



The Vast Majority of Medical and Technical Staff Are Documenting Their Knowledge Through Credentialing

As the knowledge and technical skills of the sonographer are paramount to accurate echocardiographic findings, IAC Echocardiography set forth from its inception the strong recommendation that all sonographers possess an appropriate credential to document their experience. In 2002, the Board of Directors analyzed nationwide data and determined that it was an appropriate time to strengthen the requirements for the sonographer members of the facility. The need for requiring a credential would be based upon the individual's role within the facility (i.e., the Technical Director versus a member of the technical staff) and an adequate lead-in time for this change was implemented through a Standard revision published in 2006, and as of January 1, 2007, all Technical Directors were thereafter required to possess an appropriate credential in echocardiography. The three currently accepted credentials are Registered Diagnostic Cardiac Sonographer (RDCS) from the American Registry of Diagnostic Medical Sonography (ARDMS), Registered Cardiac Sonographer (RCS) from Cardiovascular Credentialing International (CCI) and for Canadians, Canadian Registered Cardiac Sonographer (CRCS) from the Canadian Association of Registered Diagnostic Ultrasound Professionals (CARDUP).

Although this requirement initially presented a challenge for some facilities to comply with, the importance of the role of the Technical Director was realized and the lead time in the announcement enabled the majority of the facilities to take the steps to be compliant. At the onset of the requirement that began in 2007, 71% of applicant facilities were compliant. To date, 97% of facilities applying for accreditation employ a credentialed Technical Director **[Table 2]**. The remaining 3% of facilities either have a physician Technical Director (if there are no sonographers in the facility) or their accreditation decision is delayed.



As a subsequent step in strengthening the requirements for the sonographer members of the facility, the Board focused its attention on the technical staff members beyond those who fill the Technical Director role. Currently, the *Standards* offer multiple pathways by which a technical staff member may document experience and training, with all staff members being encouraged to acquire an appropriate credential in echocardiography within two years of completing their training. In 2010, the *Standards* were strengthened, requiring facilities to demonstrate the process whereby non-credentialed sonographers employed by the facility would eventually become credentialed beginning in January 2014 as a normal component of professional development.

To date, more than half (55%) of technical staff in currently accredited facilities are credentialed in echocardiography **[Table 3]**. The goal is to increase this number by having facilities implement a reasonable plan for sonographers to gain credentialing as a normal component of expected career development. Specific to physicians, in 2010, the *Standards* were amended to include a requirement for Medical Directors applying under the practice experience pathway to document "Testamur" status by successfully passing the National Board of Echocardiography's (NBE) ASCeXAM examination of special competence in adult echocardiography by December 31, 2015.

Intersocietal Accreditation Commission Echocardiography Data Reflects a Decade of Change cont /////



In the past two years, 27% of the Medical Directors who have applied for accreditation using the practice experience pathway (1.1.1.3A) have earned NBE testamur status. While the requirement does not pertain to medical staff, 41% of the medical staff who have applied for accreditation using the practice experience pathway have also earned Testamur status by the NBE **[Table 4]**.



table 4

Adoption of Appropriate Use Criteria and Its Measurement

Supporting the premise that the appropriate use of diagnostic and therapeutic procedures should support efficient use of medical resources, while also providing patients with quality appropriate care, the IAC made it a priority in 2010 to incorporate a requirement for appropriate use in its accreditation programs for nuclear/PET and adult echocardiography. As payers, lawmakers, physicians, and patients are increasingly looking for ways to increase the value of health care, appropriate patient selection is critical to achieving this goal and to the delivery of high quality care. Appropriate Use Criteria (AUC) are developed and published by several medical specialty societies including the American College of Cardiology Foundation. Such criteria define "when" and "how often" to do a given procedure in the context of scientific evidence, the health care environment, the patient's profile, and a physician's judgment. The ACCF Appropriate Use Criteria documents¹ were designed to be valid either prospectively, as a point of ordering tool by the referring physician or retrospectively to assess "practice patterns."

Although data linking clinical outcomes to implementation of AUC criteria are only beginning to emerge, the AUC documents are the only existing tools which allow facilities to retrospectively address whether imaging was reasonable for a given patient, based on the available clinical information. Previously, the Standards did not address the critical initial link (was the study ordered appropriately) in the "chain of quality." Previously, accreditation dealt mainly with "how to do" and not "when to do." Accordingly, the IAC Echocardiography Board published its determination in 2010 that by January 1, 2012, facilities would be required to sample and rate appropriate use for a small number of sequential exams annually. While not onerous, this effort is thought to be important for educating accredited facility staff members and their referring physicians. Although a work in progress, the goal is to improve stewardship of a valuable resource and to lessen the potential downstream adverse effects of unnecessary exams. Since January 1, 2012, participating facilities have needed to submit the results of retrospective sampling of AUC for each modality (TTE, TEE, stress echocardiography) with the eventual goal to improve a facility's appropriate use. To be in compliance, facilities are required to implement an appropriate use educational tool to be available as needed for referring physicians as a normal component of the facility Quality Improvement (QI) Program. The IAC provides resources such as sample letters and documents for customization by facilities as they strive to comply with the Standards.

According to Raymond Stainback, MD, FACC, FASE, IAC Echocardiography Board Immediate Past-President, "It is critical to note that facilities are not required to achieve a defined percentage or level of appropriate studies, nor are they judged based upon the results of this metric. Rather, the purpose of requiring periodic appropriate use measurement is for facility self-education so that facility staff members may then be a valuable and credible source of information for referring physicians. An obvious goal over time would be to create an environment that supports increasing reasonable and appropriate use while reducing 'rarely appropriate' use whenever possible."

> *SEE THE ARTICLE ON PAGE 20 FOR A REAL-WORLD QI PROGRAM IN ACTION!

The Evolution of IAC Echocardiography Accreditation Over the Last Decade

Related to the structure of the IAC, a major change occurred in April 2008 when the IAC merged its then five individual accrediting bodies (ICAVL, ICAEL, ICANL, ICAMRL, and ICACTL) into one IAC. This significant change moved the IAC from its role as a mere management organization, as it had existed for the past 12 years, to one official accrediting body, with multiple divisions.

Sandra Katanick, IAC CEO, reflects on that time in IAC's history, "The IAC reorganization marked the biggest change in our history. It was incredibly beneficial to the division Boards as they were freed of the business responsibilities of running a company and instead were able to focus their efforts on the important work of setting and maintaining standards in their areas of expertise."

The reorganization positioned IAC to be able to rebrand in 2012, with each division distinctly carrying IAC as its official name, followed by the modality (i.e., ICAEL became IAC Echocardiography). Resulting from the culmination of extensive research on the needs of facilities seeking accreditation, the new IAC brand is more than a name and logo change; it represents an evolved process to better meet the needs of participating facilities.

CMS/MIPPA

In 2008, Congress enacted the Medicare Improvements for Patients and Providers Act (MIPPA). This law, which became effective January 1, 2012, requires all nonhospital providers of advanced diagnostic imaging services (CT, MRI, Nuclear Medicine and PET) to be accredited as a condition for reimbursement.

The IAC is designated as an approved accrediting organization, by the Centers for Medicare and Medicaid Services (CMS), along with two other accreditation bodies, the American College of Radiology (ACR) and the Joint Commission. While the MIPPA law does not apply to echocardiography and vascular facilities, a few universal policy changes were set forth by IAC to comply with the CMS requirements.

In an effort to further substantiate continued compliance by accredited facilities and in response to the requirements sanctioned by CMS, the IAC implemented a policy requiring all accredited facilities to undergo an audit or site visit at some time during their three-year accreditation period. From January 2010 (when the policy was instituted) through July 2013, the IAC has conducted more than 2,200 random audits and 13 site visits, a process that will continue.

Multiple Sites

Also in response to the requirements sanctioned by CMS, in August 2011 the IAC announced a policy change related to mobile services. The previous mobile service policy was eliminated and the current multiple site (fixed and/or mobile) policy became effective through which mobile sites now apply as multiple sites.

As many cardiology practices have merged with larger practices or hospitals, those changes coupled with a response to the new multiple site application policy have resulted in the IAC seeing an increase in multiple site applications **[Table 5 & 6]**. This increase indicates that regardless of their setting, echocardiography facilities find value in and are committed to retaining their accreditation.



table 5

Poll of Visitors to IAC Websites (May 2013)

	Votes	Ratio
Yes, in the past 12 months	252	20%
Yes, in the past 24 months	147	12%
Yes, more than 24 months ago	141	11%
No, we do not anticipate a merger	593	48%
No, but we anticipate a merger within the next 12-24 months	102	8%

table 6

Intersocietal Accreditation Commission Echocardiography Data Reflects a Decade of Change cont /////

Enhancements to IAC Process

To ensure that the field of echocardiography has access to a rewarding process for documenting quality, the IAC strives to continuously improve its operations. The most tangible example of that evolution occurred in 2010 with the launch of Online Accreditation for adult echocardiography, followed by the version for pediatric echocardiography made available in 2011. This application format is userfriendly and ended more than a decade's use of the paper application. The online format has enabled facilities to access their accounts 24/7 from any computer with Internet access.

In more recent years, further improvements have been integrated into Online Accreditation to continue streamlining the process by which applicant facilities submit their data for review. Participating facilities benefit from such enhancements as a checklist to quide them through the application process, icons that display milestones recorded for their current application and progress indicators to show their stage within the current application. They have access to clinical and administrative staff through not only e-mail and telephone but also live chat capability during their use of the online application. Also, accredited facilities now have direct access to tools for promoting their accreditation and commitment to guality. Future plans include a method for submitting case studies online which will not only improve efficiency for applicant facilities but will streamline the review process.

In May 2012, the IAC began posting all new, proposed *Standards* for a 60-day comment period. The comment period provides an opportunity for the public to submit their comments related to potential *Standard* revisions, for consideration by the IAC Echocardiography Board of Directors prior to incorporation. To date, feedback obtained through the public comment period has resulted in two changes to the *Standard* revisions.

In mid-2012, the IAC identified research as a core strategy toward furthering its mission and announced efforts to support innovative and meritorious research programs relevant to facility accreditation. As part of that initiative, a major research effort into all aspects of accreditation with the expressed purpose to critically evaluate and improve the process through the establishment of the IAC Research Committee was announced. The IAC Research Committee consists of a research officer and representation from each IAC division and awards research grants each year. Four grants were awarded as part of the inaugural cycle and in 2013 eligibility of applicants was expanded to include sponsoring organizations along with their members.

As the field of echocardiography continues to advance, the IAC looks forward to continuing to monitor trends within the field and offering a program that ensures that health care suppliers have an optimal process through which to document their commitment to quality. \clubsuit

ASE is a sponsoring organization of the IAC. ASE appoints volunteer members to represent the Society and the field to the boards of the IAC Echocardiography, IAC Vascular Testing and IAC CT. ASE and its leadership are committed to the support of lab accreditation as a means to help labs maintain and improve the quality of patient care.

REFERENCE:

1. Appropriate Use of Cardiovascular Technology: 2013 ACCF Appropriate Use Criteria Methodology Update: A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force. Robert C. Hendel, MD, FACC, FAHA, FASNC; Manesh R. Patel, MD, FACC; Joseph M. Allen, MA; James K. Min, MD, FACC; Leslee J. Shaw, PhD, FACC, FASNC, FAHA; Michael J. Wolk, MD, MACC; Pamela S. Douglas, MD, MACC, FAHA, FASE; Christopher M. Kramer, MD, FACC, FAHA; Raymond F. Stainback, MD, FACC, FASE; Steven R. Bailey, MD, FACC, FSCAI, FAHA; John U. Doherty, MD, FACC, FAHA; Ralph G. Brindis, MD, MPH, MACC, FSCAI, ex officio. HYPERLINK "http://content.onlinejacc. org/article.aspx?articleid=1655352" http://content.onlinejacc.org/article. aspx?articleid=1655352

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INDUSTRY TRENDS, NOT FEDERAL LEGISLATION, PUSH HEALTHCARE FORWARD

By Joel R. Sauer, VP - Consulting, MedAxiom

A whole lot of energy has been given to the Affordable Care Act (ACA), also known as Obama Care, particularly in Washington, DC. There has been significant effort to get the law repealed, which went all the way to the Supreme Court earlier this year. Given this, one might presume that if the ACA were repealed all of the trends pushing healthcare today would suddenly disappear. Although this might be a logical conclusion, it would also be wrong!

It was fascinating how little attention the Supreme Court decision received within the healthcare provider community. It's not that the ACA is inconsequential; any law entailing 13,000 pages is bound to have an impact. There are now, however, several mega trends that are pushing the provider community – trends that may have their genesis in the ACA, but their fates are no longer inherently tied. These pressures have taken on a life of their own and will continue to evolve even if the law is repealed.

Changing Payment Paradigm 🗲

The historical payment model for healthcare has been one almost entirely focused on volume. Reimbursement has been tied to units produced, particularly on the physician side of the equation where Relative Value Units (RVUs) drive revenue. The Diagnostic Related Grouping (DRG) system, which was implemented in the 1980s. introduced a certain level of risk for inpatient work by establishing a set payment amount based on risk-adjusted diagnoses. However, this same system offers myriad "outlier" payments and, other than perhaps length of stay, has historically had no emphasis on quality. The hospital outpatient payment system operates more akin to the physician (professional) side, where volumes are measured by Ambulatory Payment Classification codes (APCs).

Under this volume-driven payment model healthcare costs have risen by more than the normal rate of inflation each of the past 30 years. Given this escalation our spending as a nation is approaching 20 percent of the total Gross Domestic Product (GDP). By comparison, the next most expensive country, the Netherlands, spends 12 percent of its GDP on healthcare. Looked at from another perspective, the US spends 60 percent more per person (\$8,680) than the Netherlands (\$5,056)¹. In a global economy this puts the US at a tremendous competitive disadvantage as our goods simply have to cost more to cover this expense - regardless of who ultimately is paying for it. Bottom line, something dramatic has to change to bend downward this cost curve.

Given all of this, those who pay for healthcare in this country – driven primarily by Medicare – have been slowly introducing value into the equation. Specifically defined, value is a function of the population served times the quality over cost.

Value = population x (quality/cost)

Here is a great example of this equation in practice. This past year hospitals who had heart failure readmission rates in the bottom quartile of the country had to pay back to Medicare 1.5 percent of their total Medicare revenue. The theory being that higher readmission rates for a population (here heart failure patients) indicates lower quality and leads to higher costs. This may seem a rather small penalty, but it can actually be a significant portion of a hospital's entire bottom line. Clearly this gets attention.

Further supporting this trend, in 2012 the Medicare Payment Advisory Commission (MedPAC) recommended the end of the fee-for-service payment system for physicians, replacing it with a system that puts greater emphasis on cost and service (value). Then early this year, the National Commission of Physician Payment Reform followed suit. Although physicians are still predominantly paid for services based on volume, we're already seeing value entering the equation. The Physician Quality Reporting System (PQRS), Meaningful Use of electronic health systems, Clinical Group Consumer Assessment of Healthcare Providers (CG CAHPS), and in 2014, Value Based Purchasing (VBP) are all examples of payment tied to non-work functions and outcomes. Individually they would seem to have little impact, but when considered collectively they can have a real financial impact.

There is also energy behind the transition of healthcare away from the sole focus being an individual patient - when you get sick we take care of you, to populations – we work hard to prevent you from getting sick. In this environment payments based on work RVUs and other volume metrics simply don't fit. Like déjà vu all over again (remember the '90s?) we're hearing talk of case rates, diagnosis based payments, and even global payments (think capitation). This type of payment environment will have a profound impact on the delivery system. Take for instance echocardiography, an outstanding diagnostic tool in cardiology for both diagnosis and treatment. In a global payment system, reimbursement for this powerful tool may be lumped together with other assets and not a separate revenue center.

The Data Revolution 🗲

What was absent in the 1990s when healthcare reform failed that is ubiquitously present today is data. And these data are becoming deeper and more sophisticated by the hour. Table 1 lists just some of the organizations and websites that any one of us can access to compare healthcare providers on cost, quality, and service. Are the data meaningful and accurate? Perhaps not, but nonetheless they're being utilized and in growing numbers.

For instance, Consumer Reports recently released its rankings of US hospitals using data compiled from sources like those in Table 1. It found that for surgical care prestigious centers like the Cleveland Clinic, Mayo Clinic, and Johns Hopkins Hospital were "no

INDUSTRY TRENDS, NOT FEDERAL LEGISLATION, PUSH HEALTHCARE FORWARD

better than midway between "better" and "worse" on the CU scale, worse than many small hospitals."² Such declarations by historically trusted ratings institutions are bound to have a major impact going forward.

TABLE 1 LIST

- > Angie's List
- > Commonwealth Fund
- > Consumer Reports
- > Hospital Compare (hospitcalcompare.hhs.gov)
- Program for Evaluating Payment Patterns Electronic Report (PEPPER)
- > Physician Compare (physiciancompare.hhs.gov)
- Quality and Resource Use Reports (QRUR)
- > Whynotthebest.org

The rise of artificial and business intelligence (AI and BI) and their collective ability to extract data from indiscrete sources such as dictation, emails, text messages, and the like is accelerating the data explosion. According to a KLAS survey, BI Perception 2012, nearly half of health systems will either replace or purchase new BI systems this year. Given that these investments are measured in millions of dollars, you can sense their importance.

Like sharks smelling blood in the water, venture capital money is pouring into healthcare to take this fire hose of data and dial it into something meaningful for those who need it. Each year more data will become available and usable. In 2014 Medicare claims data for Part B (the physician side) will become public, just like data from the hospital side, adding to this data feeding frenzy. Summing up the data revolution, Jack Lewin, former head of the American College of Cardiology (ACC) notes, "In terms of underperformance . . . there's simply no place to hide."

Rise of the Consumer 🔶

Now armed with the data from sources well beyond those referenced above, perhaps for the first time the consumer is becoming a powerful force in guiding healthcare. While previous generations were apt to simply listen to their physicians and other providers, those needing services today are starkly different. For instance, the Baby Boom Generation began turning 65 years old this past year and will undoubtedly require more and more healthcare as time goes forward. This wave, 90 million people strong, is going to have a profound impact on how we deliver care. Paul Begala, a former advisor to President Clinton and now a CNN analyst, once described Baby Boomers as, "the most self-centered, selfseeking, self-interested, self-absorbed ... [generation] in American history". Clearly this group will have greater expectations than did their mothers and fathers - now often under the care and guidance of these same Baby Boomers.

These heightened expectations also come from the fact that consumers are paying more and more of the overall healthcare tab. During World War II, in an effort to ease the burden of war-supporting wage freezes, Congress blessed the provision of health insurance as non-income; in other words, it received a preferential tax status. For the next 40-plus years employers assumed more and more of total healthcare expenses, which gave rise to \$10 co-pays and very small deductibles. That trend has now reversed itself and the consumer is projected to once again pay the bulk of total healthcare expenses within the next five years³.

Given that the payment model is now shifting more and more to populations, attracting these groups will be paramount for health systems to be successful.

Looming Cardiology Shortages . . . or Surplus

As recently as 2009, the ACC was projecting a shortage of approximately 16,000 cardiologists in the United States by 2025⁴. This calculation was based on a variety of factors including age of the workforce, pending demand for services, and technology advancements. Data from the 2012 MedAxiom survey found that more than one in five cardiologists (22%) was over the age of 60, with only eight percent between the ages of 30-39. As mentioned earlier, with 90 million Baby Boomers hitting retirement age it is logical to presume an increase in demand for services like cardiology.

Recently, however, utilization of cardiovascular services began to decline. Graph 1 shows trends for both inpatient and outpatient key testing volumes over the past five years⁵. As can be seen, only outpatient echocardiography has seen increases during this span, while all others have steadily declined. The graph may not demonstrate just how significant these changes in utilization actually are for the typical practice. Again utilizing MedAxiom survey data, Table 2 illustrates the impact on catheterization volumes within the median sized cardiology practice based on changing utilization trends.

As is typical in healthcare, it's not just one thing that is influencing these changes in utilization and testing volumes. Appropriate Use Criteria (AUC) are certainly having an impact and the ability to present these standards at the point of care via EMRs and other electronic means is hastening their use. Additionally, technological advancements in both drugs and devices have muted patients' needs for additional procedures. Many also believe the Great Recession had a blunting effect on patient demand. Spurred by the ACA, we may see the rise of the Patient Centered Medical Home where a team of professionals will take on an expanded role in managing chronic illnesses, such as hypertension, diabetes, and even congestive heart failure.

Regardless of the cause, there is no doubt that utilization patterns are changing and that, for the most part, they are declining. Whether this trend continues time will tell and, more importantly, whether it will be enough to offset the Baby Boom impact and pending cardiology retirements remains to be seen. As reality plays out, we'll find out together which was the greater mega trend! • For over 14 years Joel was CEO of a large Midwestern multi-specialty group that included 23 cardiologists. In 2009 he led the integration of his group into their primary hospital system and assumed leadership of all its employed physicians. He joined MedAxiom Consulting in March, 2012. MedAxiom Consulting partners with organizations, offering expansive knowledge of healthcare delivery systems and performance improvement to help you implement customized, yet scientifically sound initiatives. Engagements and projects have specific and unique attributes but primarily fall into nine (9) main areas including Physician Compensation, Cardiovascular Service Line Management, Integration and Alignment Strategies, Hospital-Physician Alignment, Strategy and Program Development, Operations and Performance Management, Financial Performance and Coding Accuracy, Clinical Quality, and Market and Business Development.

RATIO OF CATH TO TOTAL COGNITIVE ENCOUNTERS IMPACT	2012 DATA
Median Group Size (FTEs)	16
Total Cognitive Encounters per FTE	2,819
Total Cognitive Encounters per Median Group	45,104
Expected Caths in 2008 (6.7%)	3,022
Expected Caths in 2012 (5.2%)	2,345
Difference	677

Table 2



Graph 1 – Trends in Key Cardiovascular Volumes

¹Source: Organisation for Economic Growth & Development (OEGD).

²"For surgery, big and famous hospitals aren't always the best", Reuters, By Sharon Begley, Wed Jul 31, 2013

³Source: Bureau of Economic Analysis

⁴Journal of the American College of Cardiology, September 22, 2009

⁵Source: 2013 MedAxiom Annual Survey

overheard on Connect@ASE

It's time for another set of featured questions and conversations posted on our online member forum, Connect@ASE. This exclusive member benefit allows you to connect in real-time with members the world over about topics related to the field of echocardiography which are relevant to your practice. We encourage all of our members to take advantage of the expertise of their fellow members and join us online. And now to the threads...

/// SOLICITING ADVICE FROM COLLEAGUES SUPERVISOR SONOGRAPHER IN TX SEEKS INPUT ABOUT REGURGITATION EVALUATION:

I would like to get feedback on evaluating regurgitation. I have been asked to evaluate the severity of Aortic, Tricuspid, and Mitral Regurg. According to the ACC, ERO is used on all these valves, however, I have discussed this with many of my cardiologists and they aren't fond of this method at all, because of accuracy. This is also sonographer dependent, so it can vary. I have fairly new sonographers and I'm having to educate them to these methods and have to get a protocol in place. Any protocols and suggestions would be greatly appreciated!

SONOGRAPHER IN IOWA SEEKS ADVICE ON TEE PROBE STORAGE PROTOCOLS:

I would like some input on how other facilities are storing their TEE probes. We are currently cleaning ours in a cleaning area, then they are stored in a cabinet with a door in the same room. Infection control is telling us that is not the proper way to do this. It has to be stored somewhere else. I have looked into the TEE systems to clean but our facility doesn't allow the use of glutaraldehyde which is what most cleaning systems use. Now our manager is looking to store this in an Echo exam room. I need some colleagues to help me go to battle on why this should not be stored in our exam rooms and how we could figure out in the future how to clean/store the probes. Help please!!!

/// BUYING DECISIONS

PHYSICIAN IN KY INQUIRING ABOUT CVIS:

I would like to start a brief forum from Academic University Hospitals on currently utilized and recommended CardioVascular Information (& Imaging) Systems. You may wish to forward this to your IT manager or medical director.

Your personal feedback on the following would be greatly appreciated by all of us as we each strive to incorporate an IT-based, efficient, and patient-centered approach to managing an extensive network of data (cath, vascular, echo, nuclear, CT, MRI, ECG, stress, etc). No perfect CVIS exists. Many of us are considering major investments in the next couple years and are looking to reach out to sites that are 'ahead of the curve'. Thanks for your participation.

/// EQUIPMENT IMPROVEMENTS PHYSICIAN IN CA SUGGESTS INTEGRATED BLOOD PRESSURE MONITORING:

I would like to enlist the support of echocardiography practitioners in urging the ultrasound industry to integrate blood pressure monitoring into clinical echocardiography equipment. An interface between commercially available automatic sphygmomanometers and the digital image display should be a relatively simple feat of engineering. This information is vital for hemodynamic interpretation of echocardiograms the importance of which industry has never seemed to grasp. After decades of personally asking industry engineers to implement this basic capability, I am now turning to this informed forum to raise the volume of this request. There is a substantial list of reasons why knowledge of an updated BP enhances interpretation and I would be happy to share these in future communications. Your response to this message and the attention of industry is most earnestly sought.

SONOGRAPHER IN NJ CONCURS:

I wholeheartedly agree. How about it, vendors? A display of at-the-moment BP is valuable to echo interpreters and helpful to compare previous and follow-up studies, possibly affecting outcomes. Stand-alone sphygmomanometers are sometimes unreliable, and too few pressures are taken during the actual study in my observation. Perhaps we will see some carts equipped at the next Scientific Sessions?

PHYSICIAN IN COLOMBIA ADDS TO THE DISCUSSION:

I definitely agree with you. The echo machine needs to record systolic blood pressure for a number of calculations, especially regarding aortic valve disease. It would be pretty neat to have the measurement coincident with Doppler recordings through LVOT and aortic valve. When calculating ZVA I have to type the systolic blood pressure into the workstation worksheet, which is cumbersome and imprecise. Thumbs up for BP integration in echo machines. ♥

If you would like to join any of these or similar discussions, or start one of your own, go to connect.asecho.org and begin connecting with your fellow members. When considering replying to a post or starting one of your own, remember that the more specific the question or reply, the more likely a thread will continue to grow and thrive.

new offerings for FASE

A growing population of ASE members are Fellows of the American Society of Echocardiography (FASE). These members have been recognized as leaders in the field of cardiovascular ultrasound.

According to FASE members, visibility as an expert is a top benefit. ASE is excited to announce two specialized products for FASE to highlight their expertise. These products will showcase your FASE status to your peers, patients, and colleagues. Purchase these new products for FASE only at ASE MarketPlace at asemarketplace.com.

A high-gloss, cherry, wooden frame, 1.75" wide, with a black mat and the ASE logo embossed in gold foil, exhibits your FASE certificate with style. This eye-catching frame will be sure to illustrate professionalism and achievement and complement any decor. \$160

An attractive 8x10" full color walnut plaque is custom engraved and elegantly displays your impressive achievement of FASE to peers and colleagues. **\$135**



If you are not yet FASE, learn the professional benefits and review the application at asecho.org/FASE

Integrating a Cardiology Private Practice with a Hospital System:



CONTRIBUTED BY: Michael L. Main, MD, FASE, Saint Luke's Mid America Heart Institute, Kansas City, Missouri

36 /// 6 Tips for Succes


Over the past five years, many U.S. private cardiology practices have integrated with health systems – recent estimates indicate ≈60% of cardiology groups are now employed by a hospital.

The reasons for this trend are multifactorial and are more related to political and economic drivers than to medical or scientific considerations. Some of the important factors encouraging cardiologists to sell their private practices and align with a hospital partner include declining Physician Fee Schedule reimbursement, increased regulatory pressures (typified by Stark legislation) and increased difficulty in obtaining credit from lenders (necessary for the successful operation of all small businesses). Additionally, younger physicians may be less interested in owning and operating a small business in comparison with their older colleagues. Finally, integration with a hospital system offers income stability (at least for now), partially predicated on the fact that hospitals can leverage higher hospital outpatient imaging fees (under the Hospital Outpatient Prospective Payment System or HOPPS). Although successful practice integration with a hospital system is a complex process, in this short review I will share six tips for successful integration based on our recent experience in Kansas City (see figure 1).

DATE BEFORE YOU COMMIT

When our private practice cardiology group, Cardiovascular Consultants (CC) integrated with the Saint Luke's Health System (SLHS) in 2010 and became Saint Luke's Cardiovascular Consultants (SLCC), it was the culmination of nearly five decades of increasingly closer collaboration between our cardiologists and the SLHS (see figure 2). From the origins of CC in 1963, to the founding of Saint Luke's Mid America Heart Institute in 1981 (the first freestanding heart hospital in the United States) (see figure 3) to the Cardiovascular Service Line Management Agreement between CC and SLHS in 1999, trust between these two entities continued to grow. In 2008, SLHS and CC announced a Professional Services Agreement encompassing all inpatient cardiology services provided by cardiologists at system hospitals, and in 2010, CC was acquired by SLHS and became SLCC, a distinct and separate 501(c) 3 (not for profit/tax exempt status) entity within the SLHS. In 2013, a favorable compensation adjustment for SLCC cardiologists was approved based on performance of the entity over the initial three years of operation. Integration will never be an easy process - however, it is our belief that the odds of success increase when both partners have a long-standing relationship built on mutual trust and a track record of successful joint ventures.

MAINTAIN GOVERNANCE

Conversations regarding hospital system employment of cardiologists often focus primarily on compensation: this is probably a mistake. Our negotiations were focused to at least an equal extent on the governance structure of our new physician entity **(see figure 4).** SLCC is governed by a Board of Directors consisting of seven SLCC cardiologists and eight hospital administrators, board members, and community leaders. A cardiologist serves as the president and chief executive officer of SLCC, and the seven physician members of the SLCC Board of Directors constitute the SLCC physician leadership committee, charged with strategic and operational oversight, and performance against budget. In our experience, maintaining physician governance is the most important key to success.

for success

ALIGN INCENTIVES

Although it is easiest to compensate physicians on a strict relative value unit (RVU) basis, this is unlikely to result in adequate long-term outcomes for either the cardiologists or the health system. At SLCC (and in CC historically) all cardiologists are paid equally for full-time work, regardless of subspecialty. This avoids any potential financial conflicts of interest (no personal economic incentive to perform coronary stenting in a patient who would be best managed medically), and encourages adherence to appropriate use criteria, other quality standards, and a culture of delivering the best care to each patient. To avoid complacency, and to maintain active physician engagement, a significant amount of annual compensation is awarded as a bonus for successful completion of group and individual metrics. As outlined by SLHS chief physician executive Dr. Len Lozada, physician performance can be evaluated and rewarded based on four distinct "buckets" including quality, productivity, patient satisfaction, and referring physician satisfaction. Examples of quality metrics could include value based purchasing parameters, care coordination with primary care physicians, and patient safety goals. Productivity measures should focus on more than simply annual work RVUs, and could include percentage of new patient visits per physician, and successful utilization of Advanced Practice Providers. Patient satisfaction is an increasingly important measure of physician productivity scoring in the physician domain on the Hospital Consumer Assessment of Health Plans Survey (HCAHPS) for inpatient work, and the Clinical and Group Consumer Assessment of Health Plans (CG-CAHPS) for outpatient visits may be useful in this regard. Finally, referring physician

satisfaction is a critical metric, including promotion of a vibrant outreach strategy. Since integration, SLCC has significantly enhanced our regional clinic outreach efforts, and embarked on an international cardiology effort in the Cayman Islands led by SLCC cardiologist Dr. Mikhail Kosiborod –patients now routinely travel to Kansas City for cardiac surgery and coronary intervention, based on this collaboration.

UNDERSTAND YOUR COSTS – AND CONTRIBUTIONS

We believe that successful integration is dependent on complete transparency and regular reporting of performance against budget. Figure 5 illustrates the Saint Luke's Health System Cardiovascular Service Line contribution margin (minus CV surgery). Although SLCC runs a deficit each month (revenues includes professional fees for cardiology services, while expenses include physician and staff salaries, and all other costs attributable to operating a physician office practice), this is only part of the story. Technical fees are also derived from the echocardiography lab, the nuclear lab, the cardiac catheterization lab, and the electrophysiology lab. The result is a very robust net contribution margin which must be considered in its entirety. These financial results are distributed monthly to SLCC and hospital system leadership, and SLCC is evaluated based on performance against budget. These reports are of course based on agreed-upon methodology for calculation of revenue center (i.e. echocardiography lab) contribution margin, and revenue center allocation for Diagnosis Related Group reimbursed inpatient stays.

The hard financial data is only one aspect of the total cardiology contribution. In 2012, SLCC delivered to the Saint Luke's Health System a paper titled "SLCC Physician Investment Analysis," which contained a comprehensive listing of important SLCC contributions since integration, including sections on new business ventures, quality metrics, Saint Luke's Hospital Foundation support, academic achievements including publications, programmatic development, new market penetration, and comprehensive medical director reports amongst many other topics. Although clinical productivity will remain the foundation for physician compensation, and adequate financial performance of physician entities is critical, it is also important for hospital systems to acknowledge the important extra-clinical contributions of cardiologists.

DON'T BET THE FARM ON IMAGING

As indicated above, many cardiology integration transactions have been largely based on the enhanced revenues hospital systems realize when outpatient cardiac imaging is performed under the Hospital Outpatient Prospective Payment System in comparison with the grossly undervalued Physician Fee Schedule (PFS) (currently an echocardiogram performed in a hospital outpatient department is reimbursed about 2.5 times higher than an echocardiogram performed in a physician office practice). In fact, in recent years, many cardiologists were in effect forced to close their private practices due to draconian cuts in physician office practice reimbursement for echocardiography services. In June, the Medicare Payment Advisory Commission (MedPAC) (an independent congressional agency) in their Report to Congress (available at http://www.medpac.gov/documents/ Jun13 EntireReport.pdf) issued a scathing indictment of this reimbursement disparity, and essentially called for a regression of HOPPS reimbursement to PFS rates. This of course ignores the much higher costs associated with imaging in the hospital setting. Although the ASE has vehemently opposed the MedPAC recommendations, it is likely that there will be some erosion in HOPPS imaging reimbursement in the coming years. The main point here - integration with a hospital system should not be based solely on enhanced imaging reimbursement, which may change over time. Instead consider this as one piece of the "physician investment analysis."

PREPARE FOR POPULATION HEALTH MANAGEMENT

Although most cardiologists still work in a "fee for service" environment, passage of the Patient Protection and Affordable Care Act has heightened interest in novel reimbursement schemes which will likely be characterized by payment for value (value=quality/cost), instead of simply payment for volume. I believe echocardiography has distinct advantages over competing modalities and is best equipped for success in the coming age of population health management. How do we enhance the quality side of the value equation? Intersocietal Accreditation Commission (IAC) accreditation of echocardiography laboratories, physician certification by the National Board of Echocardiography (NBE), and sonographer registration by the American Registry for Diagnostic Medical Sonography (ARDMS) or the Cardiovascular Credentialing International (CCI) are all important metrics which indicate a

Although most cardiologists still work in a "fee for service" environment, passage of the **Patient Protection** and Affordable Care **Act** has heightened interest in novel reimbursement schemes which will likely be characterized by payment for value (value=quality/cost), instead of simply payment for volume.

commitment to quality patient care. Additionally, technical innovations including ultrasound contrast agents, strain imaging, and 3D imaging have enhanced the reputation of echocardiography as the "one stop shop" for essentially all cardiac imaging questions. On the cost side of the value equation, echocardiography stands alone, with low platform costs, low staffing requirements, low supply costs, and high patient throughput. A sophisticated analysis we recently performed indicated that at Saint Luke's Mid America Heart Institute, we can perform 5.3 echocardiograms for

for success

CONCLUSION

Integrating a private practice into a hospital setting is a complex process. Integration (like all change) can be challenging. However, as retired U.S. Army four star general Eric Shinseki stated, "If you don't like change, you're going to like irrelevance even less." If you are considering integration with a hospital system, these six tips may help you manage that change, and help you remain relevant.

I believe echocardiography has distinct advantages over competing modalities and is best equipped for success in the coming age of population health management.

the same cost as one cardiac nuclear study. **(see figure 6)** Considered in the context of patient satisfiers such as lack of radiation exposure, portability, and interaction with highly educated and informed sonographer health care providers at the point of care, echocardiography is most likely to succeed in the coming era of bundled payments and population heath management. Educating our colleagues and hospital partners on the quality and cost attributes of echocardiography can only enhance the odds of successful long term integration.

Dr. Main is the medical director of the cardiovascular ultrasound imaging laboratory at Saint Luke's Mid America Heart Institute. He also serves on the Board of Directors of Saint Luke's Cardiovascular Consultants, a large cardiology group which successfully integrated with the Saint Luke's Health System in 2010. He also serves on the ASE Advocacy Committee.

FIGURE LEGENDS

Figure 1. Integrating a private practice with a hospital system is a complex process. These six tips may help increase the odds of success.

Figure 2. Cardiovascular Consultants and the Saint Luke's Health System have worked together for nearly 50 years. When CC integrated with SLHS in 2010, trust between these two entities was well established.

Figure 3. Cardiovascular Consultants physicians Drs. Geoff Hartzler and Barry Rutherford meet with Dr. Andreas Gruntzig at the Saint Luke's Mid America Heath Institute in 1980. Gruntzig had performed the world's first coronary angioplasty in 1977. Hartzler and Rutherford went on to illustrious careers in interventional cardiology, pioneering the use of coronary angioplasty in acute myocardial infarction and in patients with multi-vessel disease. (This photograph originally appeared in Circulation, 2012; 125:2958-2960, in the article Geoffrey O. Hartzler, MD: A Tribute, by Barry D. Rutherford, MD; Joel K. Kahn, MD; David Strelow; and David R. Holmes, Jr, MD.)

Figure 4. Organizational structure of Saint Luke's Cardiovascular Consultants. A governance structure focused on physician leadership is the most important key to success.

Figure 5. Saint Luke's Health System Cardiovascular Service Line Contribution Margin (minus cardiovascular surgery).

Although SLCC has more expenses than revenues, this is only part of the story. Technical fees are also derived from the echocardiography lab, the nuclear lab, the cardiac catheterization lab and the electrophysiology lab. The result is a very robust net contribution margin which must be considered in its entirety.

Figure 6. Relative cost per unit of service for inpatient and outpatient cardiovascular imaging within Saint Luke's Health System.

TIPS for SUCCESSFULINTEGRATION

- Date Before You Commit
- Maintain Governance
- Align Incentives
- Understand Your Costs...and Contributions
- Don't Bet the Farm on Imaging
- Prepare for Population Health Management

DATE BEFORE YOU COMMIT

- 1963: James Crockett MD begins cardiology program at Saint Luke's Hospital
- 1976: Cardiovascular Consultants Founded
- 1981: Saint Luke's Mid America Heart Institute Dedicated
- 1999: Cardiovascular Consultants Granted Cardiovascular Service Line Management Agreement; CC President named MAHI executive medical director
- 2000: Rival Groups Depart the Saint Luke's Campus
- 2008: Cardiovascular Consultants and SLHS announce professional services arrangement for inpatient services
- 2010: Cardiovascular Consultants is acquired by the SLHS and becomes Saint Luke's Cardiovascular Consultants, a distinct 501(c) 3 entity within the SLHS
- 2013: Favorable compensation adjustment after review of SLCC performance to date



Cardiovascular Consultants and Saint Luke's Mid America Heart Institute

Drs. Andreas Gruntzig, Geoff Hartzler, and Barry Rutherford



Relative Cost per Unit of Service for In and Outpatient Cardiovascular Imaging

5.3 Echocardiograms for Every Nuclear Study

NUC

ECHO



FIG.2

GETTING THE SKINNY ON MOC AND HOW TO GET ECHO-SPECIFIC CREDITS FROM ASE Maintenance of Certification through the American Board of Internal Medicine: How ASE Can Help You

This year, ASE will be releasing its first ever Maintenance of Certification (MOC) module, approved by the American Board of Internal Medicine (ABIM) for 10 MOC points towards its Self-Evaluation of Medical Knowledge requirement. This case-based activity will provide users with dedicated echocardiography content from experts that can be used to earn points towards ABIM certification(s)! In advance of this product's release and with an understanding of the changes to the MOC requirements that will go into effect in 2014, ASE is addressing some of the most frequently asked questions from our members.

WHAT IS MOC AND WHO PARTICIPATES?

As described by the American Board of Medical Specialties (ABMS), MOC is a four-part process of lifelong learning and competency in a specialty/subspecialty that includes measurement against six core competencies, including professionalism, patient care and procedural skills, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, and systems-based practice. There are 24 medical specialties for board certified physicians, including internal medicine, anesthesiology, and pediatrics, that are part of the ABMS Member Boards and participate in the ABMS MOC[®] program.¹

Contributed by: Cheryl Williams, ASE Education Manager

education corner

WHAT IS THE PROCESS FOR MOC AND WHO DETERMINES THE CRITERIA WHICH MUST BE MET?

The four-part process includes: **1)** Licensure and Professional Standing, which means holding a valid license in at least one state within the U.S. or Canada, **2)** Lifelong Learning and Self-Assessment, to include participation in educational and selfassessment programs that meet the standards set forth by each specialty board, **3)** Cognitive Expertise, as demonstrated through formal examinations, and **4)** Practice Performance Assessment, whereby physicians assess the quality of care they provide, compare to national guidelines, benchmarks and peers, apply the new recommendations to their care and conduct follow-up assessments to gauge improvement of patient care. The specific activities and criteria by which each of these four processes are met is determined by each individual subspecialty board.¹

AS A CARDIOLOGIST, I AM CERTIFIED WITH THE ABIM. WHAT ARE THEIR REQUIREMENTS?

ABIM is currently making changes to its MOC program requirements, which will be launched in early 2014. Under these guidelines, you will be required to complete and earn 100 ABIM MOC points every 5 years (first deadline of December 31, 2018). Twenty of these points must be in Self-Evaluation of Medical Knowledge (i.e. Lifelong Learning and Self-Assessment) and 20 points must be in Self-Evaluation of Practice Assessment (formerly Practice Performance). In addition, a patient safety module must be completed and a patient survey must be conducted every five years. Of note, at least one MOC activity must be completed every two years, the first of which must be done by December 31, 2015.²

YOU MENTIONED MOC REPORTING. WHAT IS THIS AND HOW DOES IT AFFECT ME?

For all Board Certified physicians, the ABIM and the ABMS will be reporting on whether or not physicians are "Meeting MOC Requirements." If you are enrolled in MOC you will be considered "Meeting MOC Requirements" as long as your medical license is also in good standing and your certification is current. You must meet the requirements as outlined above to keep this status throughout your certification.

DO I HAVE TO BE ENROLLED IN AN MOC PROGRAM IF I AM CERTIFIED WITH THE ABIM?

To be reported as "Meeting MOC Requirements" you will need to be enrolled in MOC. However, if you are not currently enrolled, there is still time. When the new requirements are launched in early 2014, physicians will have until March 31, 2014 to activate their MOC program. If you are already enrolled, you will still need to activate your program in January and identify which certifications you will be maintaining. From that time, you will have until December 31, 2015 to complete an activity for ABIM MOC points to continue to be reported as "Meeting MOC Requirements."²

I HAVE A LIFETIME CERTIFICATION WITH THE ABIM. WILL I NEED TO ENROLL IN THE MOC PROGRAM, OR WILL MY GRANDFATHERED STATUS REMAIN IN EFFECT FOR MY CERTIFICATIONS?

ABIM will continue to honor all certifications issued, and those that have lifetime certificates will remain certified if still holding a current and valid medical license. However, ABIM will be reporting on the MOC requirement status of all physicians, regardless of when they were initially certified. This means that lifetime certification holders who do not meet program requirements will be reported as "Certified, Not Meeting MOC Requirements." To meet MOC requirements, physicians holding a lifetime certification will need to meet the point requirements as described above AND pass the MOC exam in their certification area by December 31, 2023.²

HAVE THE ABIM EXAM REQUIREMENTS CHANGED?

No, a secure examination must be taken, and passed, once every 10 years for each certification area you want to maintain. Starting in 2014 you will earn 20 MOC points for your first attempt in each certification area, however this will not count towards the required medical knowledge or practice assessment point distribution requirements.²

education corner cont.

WHERE CAN I FIND MOC ACTIVITIES?

Based on requests from our members, ASE is releasing its first, echo-specific MOC activity titled "ASEUniversity III: Case-based Learning Volume 1," which covers several key topic areas through a study of clinical patient scenarios provided and analyzed by field experts. Topics covered will include new technology, artifacts, valvular heart disease, ventricular size and function, coronary artery disease, cardiomyopathies, congenital heart disease, Doppler, diastolic function, pericardial disease, stress echocardiography and cardiac masses. This activity has been approved for 10 ABIM MOC points towards medical knowledge requirements and will be available for purchase soon on www.ASEUniversity.org. Also look for complementary learning sessions at upcoming live ASE conferences (Echo Hawaii 2014; State-of-the-Art 2014, etc.) that will provide you with interactive discussion time with echo experts to help guide you through the cases found in this online module.

ASE will continue the development of activities for approval under ABIM's MOC program. In the meantime, you can also visit **www.abim.org/mk** for a list of approved medical knowledge point options.

REFERENCES

> MOC Competencies and Criteria. 2013. www.abms.org/ Maintenence_of_Certification/MOC_competencies.aspx. Accessed August 15, 2013.

> Coming January 2014: A More Continuous ABIM MOC Program. 2013. moc2014.abim.org/whats-changing.aspx. Accessed August 15, 2013.

MORE ASE MARKETPLACE UPDATES: EDUCATIONAL PRODUCTS FOR YOUR PRACTICE

Looking for more great educational products and services from ASE? Look no further. In addition to our upcoming echo-specific MOC activity, ASE is releasing a number of great new items to help you in your practice including posters, textbooks, DVDs and more. Keep reading to find out more.

JUST RELEASED:

TOOLS FOR THE EVOLVING USES OF CARDIAC ULTRASOUND

In October, ASE released a state-of-the-art focused cardiac ultrasound training DVD titled "Focused Cardiac Ultrasound: Fundamental Principles of Acquisition and Interpretation." This DVD features several interactive sections for flexible presentation, including an easy to navigate DVD menu, a review of cardiac orientation and anatomy, an overview of anatomical landmarks and the transducer positions for parasternal long and short axis, apical, and subcostal image acquisition as well as the anteroapical and posterolateral basal lung views, imaging examples of a wide variety of pathologies, case presentations with discussions, and an interpretation practice section designed to gauge levels of familiarity with the materials presented.



Not currently performing focused ultrasound? Encourage your colleagues to join ASE to take advantage of our discounted member rate for products and experience everything that ASE has to offer to the field of cardiovascular ultrasound.

EVERYTHING YOU NEED ON COMPREHENSIVE TEE

In September 2013, ASE and the Society for Cardiovascular Anesthesiologists (SCA) released "Guidelines for Performing a Comprehensive TEE Examination," which presents the 28 views in a comprehensive TEE examination, along with suggested protocol for image acquisition. To ensure easy incorporation of this guideline into practice, ASE has released a poster and a guideline insert filled with the important facets of the guideline for you to access at a glance from your echo lab or office.

The poster measures 24x30 and can be purchased by ASE members for \$30 and nonmembers for \$40. While you are purchasing the poster, don't forget to add the guideline insert to your cart – which can be easily incorporated into your Guideline Reference Book for easy at-a-glance access to all of ASE's practice standards.

COMING SOON:

A DYNAMIC VIEW OF ECHOCARDIOGRAPHY

In 2011, ASE published its successful *Dynamic Echocardiography* textbook: a 475 page look at the field of cardiovascular ultrasound. Now, three years later ASE is releasing the second volume in this popular series – complete with all new chapters and brand new information reflective of the rapidly changing field and advances in technology. Under the expert guidance of Roberto Lang, MD, FASE, Itzhak Kronzon, MD, FASE, Steven Goldstein, MD, Victor Mor-Avi, PhD, FASE, and Bijoy Khandheria, MD, FASE, *Dynamic Echocardiography, 2nd Edition* will explore everything you need to know in order to apply the latest cardiovascular ultrasound techniques and technology into your practice. This textbook will be geared towards physicians and sonographers alike, and will be a useful practice aid regardless of your level of experience.



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BRIDGEPO

GET READY TO TOAST Pottag Celebrating ASE'S 25TH ANNIVERSARY

The White Stag sign at the west end of The Burnside Bridge has been a fixture of the city since 1940





ASE is excited to be celebrating its 25th anniversary of Scientific Sessions in Portland, Oregon. While you may know that Portland is a vibrant city filled with roses and food trucks, you may not know about the exciting local beverage scene.

There was a time when rain was the liquid most strongly associated with Portland. It still rains here, but these days, locals use all that "liquid sunshine" to craft beer, brew coffee, steep tea, and mix many fine cocktails. The rain also nourishes nearby wine- and beer-dependent crops of grapes, hops, and barley. And Portland's wet months might be part of the reason the city has so many convivial pubs, coffeehouses, wine bars, cocktail lounges, and tearooms. Many of these specialize in the local, artisan-crafted beverages for which Portland is now internationally acclaimed — everything from pear brandy to Pinot Noir.

Here's a quick primer on the five key liquid assets for which metro Portland is known: beer, wine, distilled spirits, coffee, and tea.

BEER

Portland first became awash in handcrafted beer in the mid-1980s, shortly after the state's progressive legislature legalized brewpubs in 1983. There are now 51 – and counting – microbreweries within city limits, ranging from large-scale operations with distribution around the country and even the world, to highly respected neighborhood brewpubs that are producing innovative new beers and bringing back largely forgotten brewing traditions. Four of the country's largest microbreweries are in Oregon: Widmer/Craft Brewers Alliance, Deschutes, Full Sail, and BridgePort.

Portland's reputation as "Beervana" has much to do with the region's access to the best ingredients for making beer. Oregon is the second largest hops-growing state in the country, with 14 different types grown in the Willamette Valley, which makes it easy for local brewmasters to produce "fresh hops" beers (made from hops picked within the previous 24 hours). Two-row barley, a soft and sweet variety of the grain that's preferred for making high-quality craft beer, also grows here, and brewers enjoy access to pure glacial water from the slopes of Mount Hood, which flows freely through the city's pipes and out of its faucets. Also nearby is the Great Western Malting Company in Vancouver, Washington, which sells a complete range of malts for brewers.

GET READY TO TOAST Portland elebrating ASE'S 25TH ANNIVERSARY CONT.



WINE

Prime growing conditions and favorable clay-loam soils have fostered Oregon's rapid emergence as one of the world's finest wine-growing regions. *Gourmet* magazine described Portland as "the Burgundy of America, rich in produce, laden with seafood, and blessed with fabulous wines."

Most of Oregon's more than 415 wineries are in the temperate, marine-influenced climate of the interior valleys, with the state's most famous AVA (American Viticultural Area), the Willamette Valley, beginning just a 30-minute drive from downtown Portland (it extends south another 150 miles, just beyond Eugene). Here you'll find more than 200 wineries set among six sub-appellations: Dundee Hills, Eola-Amity Hills, McMinnville, Ribbon Ridge, Yamhill-Carlton District, and Chehalem Mountains.

Wine grapes were first planted in the Willamette Valley in 1847, but it wasn't until the late 1960s that Oregon's modern winemaking tradition began. That's when a number of maverick students from the University of California, Davis, winemaking program began to try their luck growing Burgundian varietals (Pinot Noir, Chardonnay) – as well as the first Pinot Gris vineyard ever planted in America – in the fertile Willamette Valley.

These efforts produced such still-prominent vineyards as Erath, Ponzi, and Eyrie Vineyard – the latter helped put Oregon on the world wine map when its South Block Reserve Pinot Noir ranked among the top three in an international tasting held in Paris in 1979. The acclaim grew during a 1985 blind tasting in New York when experts compared Oregon and Burgundy wines of the same vintage. Not only could the experts not distinguish Oregon from Burgundy, the five top-rated wines were all from Oregon.

Today, the Willamette Valley is recognized as one of the world's premier wine-producing regions, and Oregon ranks second nationally in number of wineries and fourth in gallons of wine produced. The growth and acclaim haven't resulted in inflated egos, though. Oregon wine producers are renowned for their down-home attitude and accessibility.

DISTILLED SPIRITS

Portland has been at the heart of the microbrew revolution since its roots in the 1980s, while the adjacent Willamette Valley has been producing world-class wines since the '70s – that ought to be enough cutting-edge and critically acclaimed beverages for one area, right? Well, no. Thirsty (and entrepreneurial-minded) Portlanders have begun blazing another trail, making the city one of the country's leaders in the artisan-distillery movement.

Several of the city's new distillers started life as brewers and are applying the skills they developed in beer making – passion for quality, dedication to local ingredients, and willingness to take risks – to crafting spirits. Others capitalized on the local wine industry, recycling the grape material left over from winemaking into eau de vie or grappa.

COFFEE

.....

A certain beverage empire may be headquartered in a city to the north, but for handcrafted, artisanal, single-origin brews that'll knock your socks off, look no further than Portland. The city's appreciation for exceptional coffee fits with its support of fine brewers, distillers, and vintners – indeed, though a number of cities around the country have fervently embraced top-of-the-line coffee, Portland continues to lead the way with its impressive selection of "third wave" artisan roasters.

Stumptown founder Duane Sorenson has been a pioneer in Portland's bold embrace of high-quality coffee and is often cited as a creator of third-wave coffee. He was one of the firsts in now widely followed practices like purchasing directly from growers at fair-trade prices and emphasizing the tasting notes of beans, depending on their origins, blends, and roasts. Other still-popular forerunners in the city's coffee scene have included World Cup, with locations inside Powell's City of Books and in Nob Hill/Northwest; Urban Grind in the Pearl District; and Boyd Coffee, which no longer has any of its own shops but was established in Portland in 1900 and continues to supply many restaurants.



Rooted in the city's coffee-making ethos is a growing dedication to eco-conscious principles. A number of roasters around the city are deeply committed to developing organic, sustainable coffee. Portland is also headquarters to Sustainable Harvest, the world's largest independent importer of organic and fair-trade coffee beans, with operations also in Mexico, Peru, and Tanzania. The company's efforts help improve the livelihoods of nearly 200,000 coffee farmers throughout Latin America and East Africa.

TEA

One of the newest stories brewing in Portland has nothing to do with local coffee roasters or craft breweries, but it fits the city to a T – or should we say "tea." Steve Smith, a tea maker of legendary proportions who founded both Stash Tea and Tazo Tea in Portland, has created a new line of high-quality, small-batch teas under the name Steven Smith Teamaker. At this small facility just west of the Pearl District, Smith and company develop, produce, and package the line while inviting visitors to see it all in real time. Tea lovers can blend a case of their own custom tea with Smith's expertise or just stop by to enjoy a cup of tea in the distinctive tasting room.

In addition to Smith Teas and Stash Teas offering tastings at their respective headquarters, the city is also home to a handful of merchants that specialize in high-grade varietal teas and blends from around the world. One of the real treats for tea lovers is visiting the Tao of Tea's Tower of Cosmic Reflections, set within the tranquil landscape of Old Town's Lan Su Chinese Garden. A chado tea ceremony is performed here monthly in summer. Tao of Tea serves primarily rare and other Chinese teas both at their location inside the garden and in their teahouse – the city's oldest – in the hip Southeast Belmont neighborhood.

The Jasmine Pearl Tea Merchants launched their company inspired by family histories and world travels enjoying tea. They sell their tea and blends wholesale, retail and online, and have a fairly new teashop in the Pearl District. Foxfire Teas is another relatively new company run by a husband and wife team in Southeast Portland. They have a retail shop, and their loose-leaf teas are a favorite of many local cafés and restaurants. Portland has a number of teahouses throughout the city, as well, such as Tea Chai Té, along bustling Northwest 23rd Street in Nob Hill, and Townshend's Tea Company, with locations on Alberta and Division streets, where you can sample fine teas from around the world, as well as their Brew Dr. Kombucha. This fermented tea, often used for its purported health benefits, is quickly developing a following.

Townshend's isn't the only kombucha brewer in the city. Kombucha Wonder Drink, founded by Stash Tea and Tazo co-founder Steve Lee, produces eight flavors at the company's Portland headquarters, including Niagara Grape, Cherry Cassis, Essence of Juniper Berry, and Spearmint & Lemon Myrtle. They're distributed nationally in pubs, spas, teahouses and gourmet food stores. Northwest Portland's family-run Lion Heart Kombucha sells its seasonal blends at the Hollywood Farmers' Market and also offers kombucha-brewing classes. ♥

We look forward to toasting ASE's silver anniversary with you in Portland next June! Registration opens November 1, 2013. Mark the dates on your calendar now to attend - June 20-24, 2014.

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Content

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- 1.3 Planes of the Heart
- 1.4 Chambers
- 1.5 Valves and Annuli
- 1.6 Blood Flow

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Animation by medmovie.com THREESE THREESE CHARLENGES of Creating a "State of the Art" Echocardiography Center in Lagos, Nigeria

Contributed by Kofo O. Ogunyankin, MD, FACC, FASE, FRCP Medical Director, First Cardiology Consultants Institute, Ikoyi, Lagos, Nigeria

I am one of the professionals referred to as "Diaspora returnees" in Nigeria. I left Nigeria shortly after graduating from medical school on a tortuous quest for postgraduate education and academic practice that took me through England, United States, and Canada. I spent more years of my life abroad, and practically my entire professional career outside my native country. I became involved in various leadership roles in the Canadian and American Societies of Echocardiography, especially training and the development of new echocardiographic technologies through research activities. I decided to return briefly to Nigeria in 2010, to help standardize the performance of echocardiography. In my mind, having served on the ASE Guidelines and Standards Committee, I thought this should be a fairly easy and uneventful process and I would soon return to America and my 'normal' professional life.

While exploring the facilities around Nigeria, giving lectures and seminars to practicing practitioners, and during discussions with professional colleagues, I discovered very quickly that my expectations of the relevance of echocardiography as a practical, affordable and versatile tool in modern clinical practice were not shared by the majority of practitioners! I had returned to Nigeria with a versatile, portable ultrasound machine, and teamed up with another American-trained Diaspora returnee (an interventional cardiologist). We initially ran an outpatient center where I personally scanned patients, but had to expand to accommodate a full inpatient and outpatient center because of a need to deliver comprehensive modern cardiovascular care services.

$\textbf{THRILLS} \otimes \textbf{CHALLENGES}$

of Creating a "State of the Art" Echocardiography Center in Lagos, Nigeria / cont.



One of the "eureka" moments of my first few months back happened during the annual scientific meeting of the Association of General and Private Medical Practitioners of Nigeria, where I was assigned a workshop on "utility of echocardiography in modern medical practice." I presented case studies on dyspnea in three patients with identical presenting complaints, identical physical examinations, but with very different clinical diagnoses. The diagnoses were constrictive pericarditis secondary to chest radiotherapy, dilated cardiomyopathy probably post-partum, and acute pulmonary embolism most likely due to frequent long-distance road travel, respectively. The dramatic way diagnosis in each case was clinched using various modalities of echocardiography including 2D echo, Doppler, Tissue Doppler and transesophageal echocardiography (TEE) selectively, was the learning point I had hoped to communicate to my audience of savvy medical practitioners. I expected questions about my approach, for example of opting for TEE to demonstrate the presence of proximal pulmonary artery thrombi rather than CT pulmonary angiography which was not accessible to me to inform a decision to use thrombolysis. However, the tenor of the discussions after my presentations made me realize that many in my audience did not think that these types of cases exist in Nigeria. There was deafening silence when I pointed out the dates of the studies and that they were patients I had treated in Nigeria within the three weeks prior to the meeting.



Having realized the fact that many physicians here manage to function without using echocardiography even though the morbidities of the patients they treat are similar to those in domains with higher utilization, I volunteered to write a feature article for each issue of the quarterly *Nigerian Journal of General Practice*, on topics such as chest pain, syncope, breathlessness, etc. As in many jurisdictions, echocardiography is performed by various cadres of practitioners with highly variable levels of competence and experience. While many studies are performed by trained cardiologists or general practitioners, many are performed by nurses or by technicians with very little experience. Echocardiographic skills are being taught to such people using a combination of the ASE echo training DVD, echocardiography simulators, and direct observation by trained echocardiographers or sonographers. General Medicine practitioners are undergoing similar training at our center and attaining the equivalent of Level 2 competence in transthoracic echo. The burden of hypertensive heart disease and idiopathic cardiomyopathy in this environment makes this quest a potential game-changer in transforming the growth of modern medical practice in Nigeria and probably similar communities around Africa.

A source of gratification in working in a resource-poor environment is being able to innovate. A lot of young university graduates without a biomedical background are interested in learning echocardiography. Echocardiographic skills are being taught to such people using a combination of the ASE echo training DVD, echocardiography simulators, and direct observation by trained echocardiographers or sonographers.

I was asked to give a second opinion for a patient who was about to be flown abroad to remove a mass from inside his left ventricle. When I repeated the echo study, I found that the patient had mild left ventricular hypertrophy with a hypertrophied inferomedial papillary muscle (misidentified as the mass).

Another challenge we face in Nigeria is substandard equipment. I am often asked to review echocardiographic images only to find that the records are made on thermal paper rather than tape or CD, and with equipment that lacks harmonic imaging and sometimes Doppler. A vexing problem is the dumping of very old and unserviceable echocardiography machines which are donated or sold to unknowing medical institutions. Images from such machines are often uninterpretable. Such equipment often breaks down shortly after purchase / use, and parts are either unavailable or unaffordable. The task of fixing this problem is enormous and requires public enlightenment against dumping.

A source of gratification in working in a resourcepoor environment is being able to innovate. A lot of young university graduates without a biomedical background are interested in learning echocardiography. Dr. Kofo O. Ogunyankin, MD, FASE, FACC, FRCP, is a longtime member of ASE, currently dividing his time between Chicago, Illinois and Lagos, Nigeria. Dr. Ogunyankin served as an active member of ASE's Guidelines and Standards Committee and currently serves on the International Relations Task Force and the International Sonographer Training Task Force. •

Caption for photo of Ogunyankin and his team. Left to Right

- 1. Dr. Adebayo Atanda
- 2. Miss Angela Amaning (Pharmacist)
- 3. Dr. Uche Ejiofor
- 4. Miss Aderonke Akindele, RN
- 5. Dr. Kofo O. Ogunyankin
- 6. Miss Queen Oseyem, RN
- Miss Aribim Ajumogobia, BSc (Lab scientist)
- 8. Dr. Adeniyi Ajenifuja

echo & Barberto



Echocardiography society leaders from around the world gathered during the ASE Scientific Sessions in Minneapolis for the International Leadership Roundtable. Hosted by ASE's International Relations Task Force and Executive Committee. the echo leaders discussed challenges, opportunities for collaboration, and trends within their parts of the world. Fifty invited leaders were in attendance, representing 19 countries. While many had to depart immediately after the hosted luncheon to attend to afternoon speaking assignments, the remaining representatives listed below gathered for a group photo:

Seated (I to r): Edward Tucay, Philippines; Cynthia Taub, ASE liaison to China; Amiliana Soesanto, Indonesia; Patricia Pellikka, ASE International Relations Chair; James Thomas, ASE Past President; Anita Sadeghpour, Iran; Lissa Sugeng, ASE liaison to Southeast Asia; Yun Zhang, China.

Standing, middle row (l to r): Partho Sengupta, ASE liaison to India; J.C. Mohan, India; Erwan Martano, Indonesia; T.G. Zhu, China; Kofo Ogunyankin, ASE liaison to Africa; Pedro Gutierrez-Fajardo, North America (Mexico); Gustavo Restrepo, South America (Colombia); Arnaldo Rabischoffsky, South America (Brazil); R.R. Kasliwal, India; Naser Ammash, ASE liaison to Middle East; Feng Xie, ASE liaison to China.

Back row (l to r): Loewe Go, Philippines; Luigi Badano, Europe (Italy); Juan Carlos Plana, ASE liaison to South America; Jong-Won Ha, Korea; Patrizio Lancellotti, Europe (Belgium); Jun Kwan, Korea; Kenneth Horton, ASE Sonographer Representative; James Tam, Canada; Stephen Heitner, ASE liaison to South Africa.



David Adams, RCS, RDCS, FASE and Fawaz Abdulalziz Al Enezi, MD

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