Course description
The Focused Echocardiography Course has been specifically developed to provide residents, fellows and practicing physicians in various clinical settings with basic and advanced cardiac ultrasound imaging and interpretation skills. Course participants will develop or significantly enhance their cardiac ultrasound imaging skills, to be able to apply them during the evaluation and management of critically ill patients. The course will meet the educational goals for both beginners and those with more advanced skills, using current evidence-based scanning protocols and algorithms. Participants will have ample opportunity to practice their image acquisition and interpretation skills in a state-of-the-art simulation center. The course objectives will cover basic and advanced principles of focused echocardiography, and not comprehensive echocardiography.

Course objectives
At the completion of this course, participants should be able to:
1. Select the appropriate transducer and system presets for a cardiac ultrasound examination
2. Describe the transducer orientation for all the basic transthoracic echo windows
3. Demonstrate the ability to obtain images in the parasternal long and short axes, apical windows (4, 5, 2, 3), subcostal, inferior vena cava, and suprasternal windows (PASS protocol)
4. Demonstrate a basic understanding of Doppler ultrasound, including color, pulsed, continuous wave Doppler, and their spectral waveforms
5. Interpret basic M-mode waveforms, and discuss some of their applications in focused echocardiography
6. Recognize images of valvular insufficiency
7. Demonstrate the ability to estimate right atrial pressure using IVC assessment in a spontaneously breathing patient
8. Demonstrate the ability to evaluate a patient for pericardial effusion, and recognize echo findings of tamponade
9. Demonstrate the ability to perform basic cardiac calculations to determine ejection fraction and cardiac output
10. Recognize images representing right ventricular volume/pressure overload, and discuss some of their clinical applications
11. Develop a systematic approach to evaluate the cardiac status of the critically ill patient
12. Discuss some of the differences between focused echocardiography and comprehensive echocardiography
Board members
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David Amponsah, M.D., Emergency Medicine
Abigail Brackney, M.D., Emergency Medicine
Christopher Clark, M.D., Emergency Medicine

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Daniel Morris, M.D., Emergency Medicine
Akshay Srikanth, M.D., Emergency Medicine & Critical Care
Stephanie Stokes-Buzzelli, M.D., Emergency Medicine

Registration
Advanced registration is required. The fee is non-refundable and cannot be reduced for partial attendance. Please register at hfhs.cloud-cme.com and look for the Focused Echocardiography course under the Live Courses tab. 3 days prior to the course you will receive a pre-course packet via email from Tina Gaines.

For registration inquiries, please contact Christina Miller, Continuing Medical Education Specialist
Direct: 313.916.3903
Email: cmille26@hfhs.org

Schedule
7:00-7:30 a.m. Check-in /Late registration / Breakfast
7:30-7:50 am Pre-test
7:50-8:00 a.m. Welcome
8:00-8:30 a.m. Cardiac Ultrasound Physics/Doppler/Instrumentation/knobology
8:30-9:00 a.m. PASS Protocol (PLAX/PSAX/A4C/A5C/A2C/A3C/subcostal/IVC/suprasternal)
9:00-9:30 a.m. Cardiac Physiology (Wiggers Diagram) / M-mode/color Doppler, pulsed wave Doppler, Continuous wave Doppler/Tissue Doppler basics
10:00 a.m.-noon Hands-on Scanning
1. PASS protocol
2. Focus on enhancing image acquisition skills
3. Identification of cardiac structures using multiple imaging windows
4. Basic introduction to CF, PW, CW Doppler, spectral waveforms

12:00-1:00 p.m. Lunch break
1:00-1:20 p.m. Volume Assessment with clinical applications
1:20-1:40 p.m. Pericardial Effusion / Tamponade Assessment
1:40-2:00 p.m. Right Heart Strain / Cardiac Arrest Assessment
2:00-2:30 p.m. Contractility / Systolic, Diastolic Dysfunction / Ejection fraction / Cardiac output calculations
2:30-3:00 p.m. Clinical cases – Review of cardiac pathology
3:00-4:40 p.m. Hands-on Scanning
1. Performing basic cardiac calculations – EF, CO, chamber size
2. Estimation of volume status
3. Basic assessment of valvular insufficiency via color Doppler
4. Systematic approach to focused cardiac assessment of the critically ill patient

4:40-5:00 p.m. Evaluation / Post-test / Questions
5:00 p.m. Adjourn

Location
Henry Ford Hospital
Center for Simulation
Education and Research
2799 West Grand Boulevard
Detroit, MI 48202
Phone: 313.916.6253

Accreditation statement
Henry Ford Health is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Designation statement
Henry Ford Health designates this live course for a maximum of [7.5 Hours] AMA PRA Category 1 Credit(s) TM. Physicians should only claim the credit commensurate with the extent of their participation in the activity.

Accessibility statement
Henry Ford Health provides qualified interpreters and other aids for deaf, blind and hard-of-hearing persons at no cost. To request assistance, contact the event sponsor Tina Gaines at 313.916.1553. Please allow a minimum of three days to process this request.

Faculty/planning committee disclosure statement
In compliance with the ACCME standards for Commercial Support, all individuals in a position to control/influence the content of this activity are required to disclose relevant financial interests of their own with any ACCME defined commercial interests for the past 24 months and/or non-FDA approved use of a drug or a device that is included in the presentation. All relevant financial relationships have been mitigated prior to the commencement of the activity.

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