



ASE American Society of
Echocardiography
Heart & Circulation Ultrasound Specialists

CONTACT:
Katy Funk
IMRE
410-821-8220
katyf@imre.com

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**STUDY FINDS HIGHLY TRAINED PHYSICIANS CAN PREVENT SUPERFLUOUS
HEALTH CARE COSTS**

Discrepancies in heart exams led to additional, costly testing including invasive heart procedures in five patients

San Diego, CA – JUNE 14, 2010 – A recent study presented at the 21st Annual Scientific Sessions of the American Society of Echocardiography (ASE) assessed the accuracy of heart ultrasound interpretations based on physician training, finding a direct correlation between accuracy in diagnosis and amount of physician training.

“Inaccurate heart ultrasound readings can affect patients both physically and monetarily,” said Kiran Sagar, MD of Aurora Sinai/St. Luke's Medical Center in Milwaukee, Wis. “There are clear health care costs associated with inaccurate interpretations of these and similar health exams. We find more training and experience leads to more accurate interpretation and less cost.”

In the study, researchers randomly selected 235 echocardiograms performed by 10 sonographers and interpreted by 34 physician readers. Three of the physician readers had the highest level of training and National Board of Echocardiography (NBE) Certification.

In reviewing the 235 studies, researchers noted significant discrepancies in 29 percent of those interpreted by physician heart ultrasound readers with lesser training. The most common misdiagnosis issue was that of patent foramen ovale and atrial septal defect which led to more invasive testing with transesophageal echocardiography (TEE). Major disagreements in stress testing with heart ultrasound were noted in five patients, all of whom underwent invasive coronary angiography.

“The cost of heart ultrasound and similar exams has been carefully scrutinized in health care discussions this year,” Dr. Sagar said. “The exam is most cost effective when it is interpreted by a highly trained reader who can accurately diagnose the patient and avoid unnecessary subsequent exams. More cardiologists have been trained to perform invasive and interventional cardiac catheterization procedures, than to accurately interpret heart ultrasound studies.”

All physicians who interpret heart ultrasounds are required to have a minimum of six months of training during their cardiology fellowship, while the highest level of training, Level 3 certification, requires a minimum of 12 months of heart ultrasound training in an accredited fellowship. Funding for advanced training in heart ultrasound and other cardiovascular imaging specialties is less available than for other medical specialties.

ASE recommends heart ultrasound training to occur in an Intersocietal Commission for the Accreditation of Echocardiography Laboratories (ICAEL) or Intersocietal Commission for the Accreditation of Vascular Laboratories (ICAVL) certified lab. ICAEL requires all physicians who interpret heart ultrasound studies participate in a minimum of five hours per year of continuing medical education (CME) devoted to heart ultrasound.

"Our data shows that five hours a year as required by ICAEL is not enough. Physicians dedicated to cardiac ultrasound are the best readers and consultants," Dr. Sagar said.

More information about training can be found at asecho.org.

The study was conducted by M. Fuad Jan, Elizabeth Thompson and Kiran Sagar from Aurora Cardiovascular Services, Aurora Sinai/St. Luke's Medical Centers, University of Wisconsin School of Medicine and Public Health- Milwaukee Clinical Campus in Milwaukee, WI.

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 organization was founded in 1975 and is the largest international organization for cardiovascular ultrasound imaging. For more information on ASE, visit www.asecho.org or ASE's public information site, www.SeeMyHeart.org.

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