AIM SpecialtyHealth®

HEALTHCARE BRIEF

APRIL 2018

Noninvasive evaluation of coronary artery disease: broadening coverage to enhance care and value

Context

Coronary artery disease (CAD) remains the most common cause of death in the U.S. The incidence of CAD is expected to rise over the next three decades as the largest segment of our population will become senior citizens.

The diagnosis and management of CAD accounts for a significant portion of health care spending and the American Heart Association projects that between 2013 and 2030 medical costs of CAD will increase by about 100 percent.[1] Providers faced with patients requiring noninvasive diagnosis or exclusion of CAD in the elective outpatient setting have many testing modalities available to them. These include EKG stress testing without imaging, stress testing with imaging (echo, nuclear/PET, MRI), and direct coronary imaging using CCTA (with or without fractional flow reserve calculation).

New focus on alternative tests

In a 2014 study, only 47 percent of patients with an abnormal noninvasive testing result had obstructive CAD on coronary angiography.[2] In that study, the vast majority of patients were tested using stress myocardial perfusion imaging (MPI) and/or stress echo (SE). The poor performance of these modalities has refocused attention on the alternatives such as PET perfusion imaging, coronary computed tomography angiography (CCTA) and cardiac MRI. Utilization of these modalities has been curtailed by availability of both expertise and imaging equipment, and by limited payer coverage policies driven in part by increased cost of testing. Nonetheless, an accumulating body of evidence suggests that these alternative modalities, because of their superior accuracy when compared to MPI and SE, may actually be more cost-effective because of reduced need for downstream imaging, in particular coronary angiography.

Discrepancies in testing accuracy emerge

Several recent publications have compared the various approaches to noninvasive diagnosis of CAD and concluded that SE and MPI are less accurate than (or in some cases are inferior to) PET,[4-7] CCTA,[4, 8-10] and MRI.[4, 7-8] Data regarding the favorable impact of these newer modalities on cost of care are also emerging. Leading researchers compared PET perfusion imaging with MPI and found that, with no difference in clinical outcomes, a 50 percent reduction in referrals to coronary angiography and an overall cost savings of 30 percent was seen when PET was selected as the initial imaging test.[3] Another study[11] demonstrated that in patients for whom coronary angiography was planned, an approach using CCTA with fractional flow reserve (FFR) as indicated resulted in 33 percent cost savings at one year. Use of cardiac MRI, at least in the emergency room setting, has been shown to reduce referrals to coronary angiography and cardiac-related cumulative one-year costs with no adverse impact on clinical outcomes.[12]

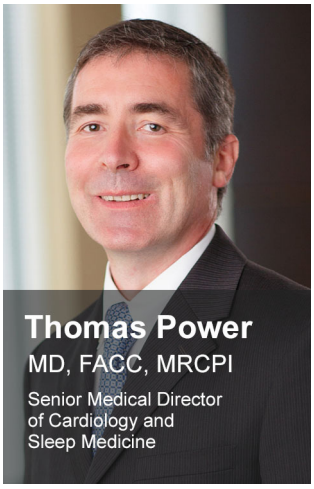
Our assessment

Implications for health plans

In the case of outpatient evaluation of CAD, there are several technologies available. In comparing these it is important to look primarily at clinical outcomes and then address long term value. Importantly, cost of care considerations must extend beyond the unit cost of the index test. Inaccurate or inconclusive testing, which leads to additional testing, is financially wasteful and often exposes the patient to additional procedural risks.

Coverage restrictions should not limit the use of newer technologies, which have been shown to reduce overall cost without compromising quality of care. At AIM Specialty Health® (AIM), we are well-positioned to determine whether the clinical and cost advantages of newer technologies seen in trials are translated to real-world settings. This information will inform future coverage positions to ensure that your members continue to have access to high-quality, high-value care.

Our goal is to ensure that the most appropriate services are available to your members when the need arises.



About the author

Thomas Power, MD, FACC, MRCPI, is the Senior Medical Director of Cardiology and Sleep Medicine for AIM Specialty Health® (AIM). Dr. Power is responsible for the clinical components of the Cardiology and Sleep Solutions.

Before coming to AIM, Dr. Power worked in cardiac imaging utilization management. He attended medical school at the University of Dublin where he graduated summa cum laude. Dr. Power was conferred with Membership of the Royal College of Physicians of Ireland prior to moving to the United States in 1988. He completed his residency and fellowship in cardiovascular diseases at Allegheny General Hospital in Pittsburgh, Pennsylvania. He also served as Chief Fellow and was the first graduate to complete an additional fellowship in noninvasive cardiac imaging. Dr. Power maintains an active clinical practice in addition to his duties at AIM.

Dr. Power is board-certified in internal medicine and cardiovascular diseases and is a Fellow of the American College of Cardiology. In addition, he holds a certificate from the Certification Council for Nuclear Cardiology and he is a Professional of the Academy of Healthcare Management. He has been the recipient of several awards for excellence in clinical teaching and a research grant from the American Heart Association (AHA). He is a former Fellow of the AHA Council on Clinical Cardiology. He has presented his research at national and international meetings and has published a book chapter and several articles in peer-reviewed journals.

Learn more about the clinical value of the AIM Cardiology Solution at www.aimspecialtyhealth.com

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About AIM Specialty Health

At AIM Specialty Health® (AIM), it's our mission to promote appropriate, safe, and affordable health care. As the leading specialty benefits management partner for today›s health care organizations, we help improve the quality of care and reduce costs for today's most complex tests and treatments.