

Acceptable Use Criteria in Echocardiography and Cardiac Stress Testing

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Introduction

Acceptable Use Criteria (AUC), has been utilized as early as 2007, and developed by a panel of cardiologists from the American College of Cardiology Foundation (ACCF), along with the American Society of Echocardiography, the American Society of Nuclear Cardiology, et al. The panel devised 98 criteria addressing appropriate use for echocardiography, and the Astellas Algorithm in acceptable use for cardiac stress testing (Lapado, Blecker, O'Donnell, Jumkhawala & Douglas, 2016; American College of Cardiology, 2011). The purpose for AUC is to assist clinicians in determining necessary testing measures to best service the needs of their patients without over-utilizing or under-utilizing non-invasive tests, thus allowing for decreased overall health care costs, and excessive burden to patients while lowering risk factors potentially associated with such testing (Scari & Cortigiani, 2017).

Objectives

The Appropriate Use Criteria was developed in response to the need for practical guidelines in ordering both Nuclear and Echocardiogram studies. As our national healthcare needs are changing, it is imperative we look for ways to monitor our responses to our clients. The intent for this project was to increase awareness of the AUC guidelines and provide a means by which ordering clinicians may refer to and provide quality care to their patients. The AUC is used as an objective guideline and may be variable under the interpretation of the use. If at any time the patients care is in question, physicians have the autonomy to order needed testing on their patients.

The AUC is a tool used in the management of cardiac conditions. This combined with clinical judgment, would indicate that the procedure is generally considered acceptable care and a reasonable approach for the indication (Hendel, 2016).

Methods

In 2019 Echocardiography randomly sampled 80 outpatients over a 4-month period, Cardiac Stress Lab randomly sampled 80 outpatients over a 4-month period. Scoring guidelines were assigned into 3 subgroups, Appropriate, Uncertain, and Inappropriate.

Scoring guidelines were set up as follows:

***Appropriate, Median Score 7 to 9

The test is acceptable and is a reasonable approach for the indication.

***Uncertain, Median Score 4 to 6

The test may be acceptable and may be reasonable, but more patient information is needed.

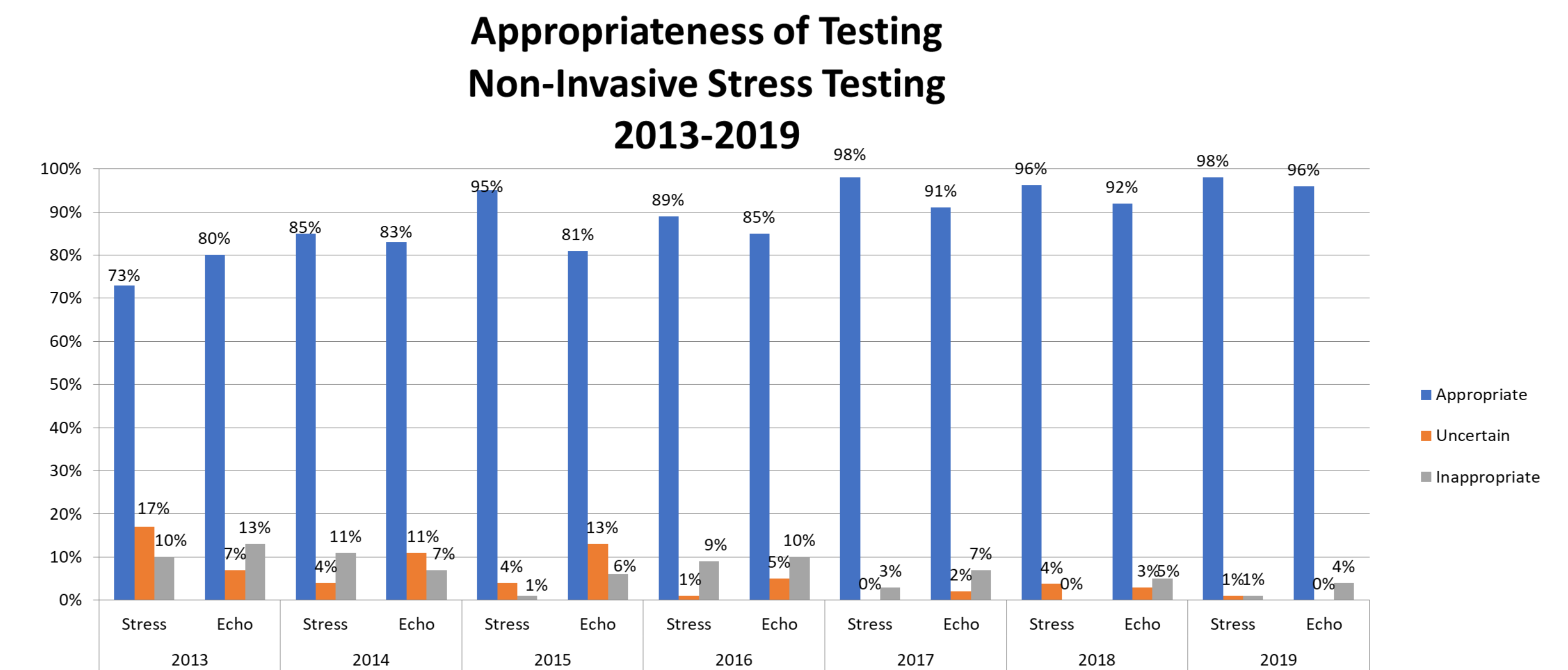
***Inappropriate, Median Score 1 to 3

The test is generally not acceptable and is not a reasonable approach for the indication.

Each patient sample was reviewed using chart history and physicals, diagnosis, recent testing evidence, and patient verbalization of complaints. The sample patients were then categorized into one of the three subgroups created by the above-mentioned expert panel of cardiologists using the Astellas Algorithm and the echocardiography acceptable use criteria guidelines.

Results

The graph below represents our findings over the past seven years, 2013 thru 2019. We have consistently seen a slight improvement in the appropriate subgroup.



Due to increased hospital volume and an influx of new physicians and mid-level providers, an awareness of AUC encourages practitioners to be mindful of their utilization of resources.

Conclusion

In today's society there is an ongoing concern for health care costs. One way to avoid a cost burden to the consumer and their provider is to utilize guidelines established by AUC. It is important that as health care providers we continually look for ways to decrease costs and avoid the 'misuse and abuse' of ordering tests.

In the near future, physicians will be required by the Protecting Access to Medicare Act, to consult AUC before ordering and billing for advanced diagnostic imaging tests for Medicare patients (Fogel, et al., 2014).

It is now the intent of the Intersocietal Accreditation Commission (IAC) to incorporate the AUC into each of its accreditation programs, ICANL and ICAEL, which enables labs to meet the criteria for medical reimbursement. As part of our routine accreditation, a measurement of the appropriate use criteria must be submitted for compliance. In addition, variances from the guidelines may put reimbursement at risk and may also be viewed as fraud.

A software tool is currently available to be downloaded onto your iPhone or iPad for both nuclear stress testing and echocardiography to assist the clinician in ordering the appropriate test for the appropriate patient.

References

- American College of Cardiology (2011). Appropriate use criteria for echocardiogram. *Journal of the American Society of Echocardiography*, 24, 229-267. doi:10.1016/j.echo.2010.12.008
- Fogel, R.I., Epstein, A.E., Estes, M., Lindsay, B.D., DiMarco, J.P., Kremers, M.S.,...Russo, A.M. (2014). The disconnect between the guidelines, the appropriate use criteria and reimbursement coverage decisions: The ultimate dilemma. *Journal of the American College of Cardiology*, 63(1), 12-14. <http://dxdoi.org/10.1016/j.jacc.2013.07.016>
- Hendel, R.C. (2016). Widespread implementation of appropriate use criteria for cardiac imaging-which are appropriate? *JAMA Cardiology*, 1(2), 211-212. doi:10.1001/jamacardio.2016.0052
- Lapado, J.A., Blecker, S., O'Donnell, M., Jumkhawala, S.A., & Douglas, P.S. (2016). Appropriate use of cardiac stress testing with imaging: A systematic review and meta-Analysis *PLOS ONE*. doi.org/10.1371/journal.pone.0161153
- Sicari, R., & Cortigiani, L. (2017). The clinical use of stress echocardiography in ischemic heart disease. *Cardiovascular Ultrasound*, 15(7), 1-16. doi: 10.1186/s12947-017-0099-2