



IMAGING AND DIAGNOSTIC TESTING

APPLICABILITY, LIMITATIONS AND IMPACT OF ECHOCARDIOGRAPHY UTILIZATION BASED ON THE 2007 APPROPRIATENESS USE CRITERIA FOR TRANSTHORACIC AND TRANSESOPHAGEAL ECHOCARDIOGRAPHY AT A TERTIARY CARE MEDICAL CENTER

ACC Poster Contributions

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Introduction: We sought to prospectively evaluate our practice patterns for outpatient TTE and TEE ordering compared to the 2007 Echo Appropriate Use Criteria (AUC) and to identify current limitations of AUC in the real world utilization of echo.

Methods: A prospective analysis of 198 consecutive outpatients who underwent TTE or TEE at our hospital over a period of 6 months. Echo studies were classified into appropriate (A), inappropriate (I), or uncertain (U) based on the AUC and based on the specialty of ordering physician by qualified cardiology personnel. The immediate impact of echo results on patient management were evaluated by review of patient records in the ensuing 1 month.

Results: Average age was 60.6 yrs with 101 males (51%). 63% were African Americans. Eighty six percent (170/198) were TTE and rest TEE. Cardiologists (CARD) ordered 42% (83/198) and non-cardiologist (NCARD) the rest (115, 58%) of echos. Overall 73% (146/198) were A, 6% were I and 20% were U category. NCARD ordered more A studies (82/146, 56.5%) than CARD (63/146 43%) but also more I studies (9/12, 75%). However CARD ordered more U studies (14/40, 42.5%) compared to NCARD (5/40, 12.5%). Importantly 36/40 (90%) U studies were not classifiable by current AUC with 47% of them representing echo evaluation requested for either heart or other visceral organ transplant evaluation which seemed indicated. Of 28 TEE done, 10/28 (35%) were U indications of which 60% were direct TEE assessment for stroke etiology. Finally 75% of A studies had positive impact on patient management, compared to 25% of I studies and 50% of U studies.

Conclusions: This single center study demonstrates that the AUC are helpful in evaluating practice patterns in a majority of outpatients undergoing TTE and TEE but important limitations exist where the AUC may need to be revised. NCARD performed very well in our study. Transplant pre and post evaluations, pre-post cardiac device intervention assessment and use of TEE as first line in stroke are important U indications requiring more AUC re-evaluation. Importantly, 50% of U AUC indication echo's seem to have a positive impact on patient management highlighting need for further research to strengthen AUC recommendations.