EDUCATIONAL INTERVENTION REDUCED THE RATE OF “RARELY APPROPRIATE” OUTPATIENT TRANSTHORACIC ECHOCARDIOGRAMS ORDERED BY ATTENDING CARDIOLOGISTS: A RANDOMIZED CONTROLLED TRIAL

Poster Contributions
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Background: Appropriate Use Criteria (AUC) for transthoracic echocardiography (TTE) provide a framework to assess appropriate versus less appropriate utilization. We previously conducted a randomized trial demonstrating that an AUC-based educational intervention successfully reduced “rarely appropriate” (rA) outpatient TTEs ordered by cardiology fellows. It is unknown if this type of intervention would be successful as applied to attending cardiologists.

Methods: We conducted a prospective, randomized controlled trial of an educational intervention designed to reduce rA outpatient TTEs ordered by attending cardiologists. We randomized 65 staff cardiologists at an academic medical center to an AUC-based educational intervention or to a control group. The intervention consisted of an introductory lecture and monthly email feedback. Feedback reports documented the percentage of rA TTEs and AUC rationale for that classification. The primary outcome was the rate of rA TTEs.

Results: 96.8% of the 3,165 TTEs were classifiable by 2011 AUC. The proportion of rA TTEs was significantly lower in the intervention versus control group (10.9% vs. 16.5%, p=0.03), and the proportions of appropriate (77.7% vs. 72.0%, p=0.07) and uncertain TTEs (11.4% vs. 11.5%, p=0.40) were similar. For all TTEs, the most common rA indications were: routine surveillance of prosthetic valve < 3 years (16.9%), routine surveillance of moderate or severe native valvular stenosis without a clinical change (14.8%), routine surveillance of known cardiomyopathy without a clinical change (10.4%), and routine surveillance of ventricular function with known CAD without a clinical change (8.3%).

Conclusion: An AUC-based educational intervention significantly reduced the proportion of rA outpatient TTEs ordered by staff cardiologists. Scheduled provider-level feedback may represent a viable strategy to improve practice patterns and optimize utilization of outpatient TTE. Since more than half of rA TTEs were for routine surveillance of cardiac conditions in absence of clinical change, focusing educational efforts on these scenarios may improve attending cardiologist adherence to AUC-based practices.