**Abstract Submission for Maltese Cardiac Society Conference 2016**

**Title: *Transthoracic Echocardiogram Requests for Suspected Infective Endocarditis: A Local Perspective***

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| Background  Infective endocarditis (IE) is a diagnostically challenging, potentially fatal condition. Transthoracic echocardiography (TTE) is the recommended first-line imaging modality despite its relatively low sensitivity. This audit aims to gain a clinical and microbiological perspective into TTE requests for suspected IE in Mater Dei Hospital and to determine the local sensitivity and NPV (Negative Predictive Value) of initial TTE in suspected IE.  Method  Urgent TTEs for suspected IE requested between May & December 2015 were selected (127 patients). TTE and TOE (trans-oesophageal echocardiogram) reports were obtained from Xcelera, whilst iSoft Clinical Manager and Electronic Case Summary used to gather further data.  Standards Used  American Heart Association and European Society of Cardiology guidelines were used.  Results  Patients were classified according to TTE results into 3 categories: Negative (60.6%), Positive (5.5%) & Equivocal (33.9%) TTE. The NPV of negative and equivocal TTE was 85.7% and 78.6% respectively. TTE sensitivity was 55% - comparable to Barton *et al*. 93% of patients had blood cultures taken. 48.3% were bacteraemic, 43.9% of which had *Staphylococcus aureus.*  Discussion  TTE has its limitations and pitfalls and must be interpreted within the clinical context, given its low sensitivity rates. However, in patients with a low clinical suspicion of IE and negative TTE, IE may be excluded. Those with equivocal TTE and high clinical suspicion of IE, will benefit from TOE.  Key messages for recommendations   1. Duke’s Criteria should be used to stratify patients into ‘Definite’, ‘Possible’, or ‘Rejected’ IE 2. Negative TTE and a low clinical suspicion for IE warrants consideration of an alternate diagnosis. 3. Encouraging use of algorithms:   https://lh5.googleusercontent.com/TiJ4RJl8BZ-SaKBYxJlaT4ETY8Pjof_OLrSMOV5Qi-K9nWNmzzTo7uiT0mE2j9cKvfILNyKCvlUj3oDXY3bT5GF4ScRCJTDhZGeiCVqLJ3bb1LDd7IUDe_CRVGdryBCuUWrb-1UO  ***Figure: An approach to the diagnostic use of echocardiography*** (Reproduced from Bayer et al.) |

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