A MAJOR GAP EXISTS IN APPLYING PUBLISHED GUIDELINES FOR PRIMARY PREVENTION OF SUDDEN CARDIAC DEATH WITH UNDERUTILIZATION OF DEVICE IMPLANTATION; AN ESCAPE DATABASE ANALYSIS

ACC Moderated Poster Contributions
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Background: Recent data revealed a high unnecessary implantation rate of ICDs. We have developed a novel ESCAPE registry to monitor, evaluate and guide physicians referral for patients with class I indication for ICD implantation.

Methods: All heart failure (HF) patients admitted to an inner city hospital and presented to our imaging laboratories with LVEF ≤35% who met Class I indication for ICD implantation were prospectively followed and included in this study. Number of implanted devices and patient outcome of death and HF readmissions were assessed at 24-month.

Results: A total of 845 patients were included in this study; 546 (64%) males, mean age 66 ± 15 years, 75% with hypertension, 35% diabetics, and 30% with coronary artery disease. At the end of the follow-up period, astonishingly only 164 (19%) patients underwent ICD implantation; yet 236 (28%) patients had adverse outcomes, including 151 (18%) deaths and 111 (11%) HF readmissions. As expected patients with evidence-based device therapy had significantly lower adverse outcomes (Figure). Using Cox hazards regression, ICD implantation (OR=0.6), beta-blockers usage (OR=0.7), and ACEi usage (OR=0.8); p<0.0001, were the most effective tools in the reduction of adverse outcomes.

Conclusions: This real world prospective study contradicts the recent published data of ICD overuse and reveals the significant gap and underutilization of ICD implantation among eligible patients which merit more attention towards rigorous physicians education.