

## Clinical Research– Junior Category

### Best Poster

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#### Disparity in Utilisation of Implantable Cardioverter Defibrillators in Asian Patients with Heart Failure

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**Aims:** Implantable cardioverter defibrillators (ICDs) can reduce mortality in heart failure (HF) patients. However, utilisation rates and determinants of ICD uptake within Asia are unclear. We thus aim to determine primary prevention utilisation rates, predictors of ICD uptake and potential barriers to device therapy for Asian HF patients.

**Methodology:** We studied 5276 patients with HF and ejection fraction (EF) < 40% from 11 Asian regions in the prospective Asian Sudden Cardiac Death In Heart Failure Registry. ICD-eligible patients were: EF ≤ 35% and New York Heart Association Class II-III. In addition to socio-demographics and clinical characteristics, patients' perceptions on device use were gathered through an interviewer-administered questionnaire.

**Result:** Of 5276 patients, 3240 (61%) were ICD-eligible and only 389 (12%) of these received the device. ICD utilisation rates varied widely across Asia with the highest uptake in Japan (52.5%) and the lowest in Indonesia (1.5%). ICD recipients were older ( $63 \pm 11$  vs  $58 \pm 13$  y;  $p < 0.001$ ), more likely to have atrial fibrillation (OR=1.54; 95% CI 1.11–2.12) and a higher Charlson Comorbidity Index ( $\geq 3$  vs  $< 3$ ; OR=1.56; 95% CI 1.08–2.26) as compared to non-recipients. ICD recipients were also better educated (tertiary vs primary or lower education, OR=5.46; 95% CI 3.64–8.18) and were residing in a higher income region (Singapore, Hong Kong, Taiwan, South Korea, Japan) (OR=6.52; 95% CI 4.43–9.60 vs lower income region [Indonesia, Philippines, India]). Among non-recipients, 33% of respondents were willing to receive an ICD. A significant proportion of patients did not understand the benefits of device therapy (33%) or lacked information to make a decision regarding device therapy (22%).

**Conclusion:** Our study highlights the under-utilisation of ICD in Asia and striking disparity across different regions and socioeconomic status. There is an urgent need for better patient education and to optimize utilisation among younger patients with fewer comorbidities who are likely to benefit from an ICD.