**PREDICTORS OF OUTCOME IN PATIENTS TRANSFERRED DIRECTLY TO THE CARDIAC INTENSIVE CARE UNIT VIA INTER-HOSPITAL TRANSFER**

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**Introduction** - Inter-hospital transfers pose a challenge to current tertiary care Cardiac Intensive Care Unit (CICU) practice. Few studies have examined outcome predictors in patients directly admitted to the CICU from an outside hospital.

**Hypothesis** - Admission characteristics can identify patients directly admitted to the CICU via inter-hospital transfer who are at increased risk of death or prolonged hospitalization.

**Methods** - We retrospectively reviewed transfer-related information for 1477 consecutive inter-hospital transfers admitted to the CICU from January 1st 2014 to April 30th 2017. The primary outcome was a composite of hospital mortality and prolonged (≥14 day) hospitalization. Chi squared test was used to compare categorical variables. Univariate analysis was followed by multivariate logistic regression.

**Results** - Mean age was 66 years. Most admissions (62%) occurred between 0800 and 2000, with no significant variation in the number of admissions based on day, month, or year. Hospital death occurred in 193 (13.1%) patients, prolonged hospitalization in 207 (14.0%) patients, and the composite outcome occurred in 369 (25.0%) patients. Independent predictors of the composite outcome were: hospital arrival time between 0800 and 2000 (OR 1.40, p=0.027), patient transferred from an ICU (OR 2.45, p<0.001), transfer by fixed wing aircraft (OR 1.66, p=0.024), circulatory failure (OR 1.71, p=0.006) or structural heart disease service line (OR 2.40, p=0.001), diagnosis of infective endocarditis (OR 2.35, p=0.035) or cardiac arrest (OR 13.16, p<0.001), Do-Not-Resuscitate code status (OR 1.71, p=0.012), requiring cardiac surgery (OR 4.71, p<0.001) or LVAD/Transplant (OR 10.55, p<0.001), and if only routine medical care was required (OR 2.37, p<0.001).

**Discussion** - We identified several predictors of hospital mortality and prolonged hospitalization in patients directly admitted to the CICU via inter-hospital transfer. These factors provide a basis for discussion with referring providers and families when evaluating patients for direct admission to the CICU may help to avoid futile and costly inter-hospital transfers.