**MAYO REGISTRY FOR TELEMETRY EFFICACY IN ARREST (MR TEA) STUDY: A DESCRIPTIVE ANALYSIS OF MEDICATION ADMINISTRATION DURING INPATIENT CARDIOPULMONARY ARREST RESUSCITATION**

**D.F. Snipelisky1**, J.C. Ray2, G. Matcha2, T. Vadeboncoeur2, F. Kusumoto2, A. Roy2,

A. Dumitrascu2, D. Harris2, M.C. Burton2

1. Mayo Clinic, Rochester, MN, USA

2. Mayo Clinic, Jacksonville, FL, USA

*Introduction*: Advanced cardiovascular life support guidelines exist, yet there are variations in clinical practice. Our study aims to describe the utilization of medications during resuscitation from in-hospital cardiopulmonary arrest.

*Methods*: A retrospective review of patients that suffered a cardiopulmonary arrest between May 2008 and June 2014 was performed. Clinical and resuscitation data, including timing and dose of medications used, were extracted from the electronic medical record and comparisons made.

*Results*: A total of 94 patients were included in the study. Patients were divided into different groups based on the medication combination used during resuscitation: 1. Epinephrine, 2. Epinephrine and bicarbonate, 3. Epinephrine, bicarbonate, and calcium, 4. epinephrine, bicarbonate, and epinephrine drip, and 5. epinephrine, bicarbonate, calcium, and epinephrine drip. No difference in baseline demographics or clinical data was present, apart from history of dementia and use of calcium channel blockers. The number of medications given was correlated with resuscitation duration (Spearman’s rank correlation=0.50, p<0.001). The proportion of patients that died during the arrest was 12.5% among those who received epinephrine alone, 30.0% among those who received only epinephrine and bicarbonate, and 46.7% to 57.9% among the remaining groups. Patients receiving only epinephrine had shorter resuscitation durations compared to that of the other groups (p<0.001) as well as improved survival (p=0.003).

*Conclusions*: Providers frequently use non-guideline medications in resuscitation efforts for in-hospital cardiopulmonary arrests. Increased duration and mortality rates were found in those resuscitations compared to epinephrine alone, likely due to the longer resuscitation duration in the former groups.