Risk Stratification Of Older Adults Who Present To The Emergency Department With Syncope: The FAINT Score.

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Objectives: Syncope is a common reason for visit to the Emergency Department (ED). Due to challenges in risk-stratification, there is a substantial amount of variability in clinical management. We sought to derive and internally validate a novel syncope risk-stratification tool to predict occurrence of serious clinical outcomes at 30 days in older adults with syncope or presyncope.

Methods: We performed a multicenter, prospective, observational study of older adults with syncope or presyncope for whom no serious diagnosis was found in the ED. We enrolled older adults (≥60 years) with unexplained syncope or presyncope from 11 ED across the United States. Patients were excluded if their symptoms were thought to be due to intoxication, seizure, stroke, head trauma, or hypoglycemia. Demographic, clinical, and laboratory variables were collected on all patients. The primary outcome was rate of serious cardiovascular events at 30 days post-discharge. Bayesian logistic regression with multiple imputation was used to derive a clinical risk score.

Results: We enrolled 3,173 older adults with syncope and no serious ED diagnosis from April, 2013 to September, 2016. Mean age was 73 years (SD: 9.0 years), 50.5% were female. Overall, the incidence of serious outcomes at 30 days was 5.45% (95% CI: 4.69-6.30%). A combination of five clinical variables: 1) history of heart Failure, 2) history of cardiac Arrhythmia, 3) abnormal Initial electrocardiogram, 4) elevated N-terminal pro B-type Natriuretic peptide, and 5) elevated high-sensitivity Troponin T was able to accurately risk-stratify patients for serious clinical outcomes at 30 days. This set of clinical variables comprises the FAINT Score, which demonstrated a sensitivity and specificity of 96.5% (95% Confidence Interval [CI]: 92.6, 98.7%) and 22.2% (95% CI: 20.7, 23.7%), respectively, with a C-statistic of 0.70, (95% CI: 0.67, 0.74) The negative and positive predictive values were 99.1% (95% CI: 98.1, 99.7%) and 6.7% (95% CI: 5.7, 7.7%), respectively.

Conclusion: Among older adults with syncope or presyncope and no serious ED diagnosis, the FAINT Score was able to predict serious clinical outcomes at 30 days. If externally validated, this tool, in concert with clinical gestalt, could help guide clinical management to optimize resource utilization.