

Use of the HEART score better allocates resource utilization in Emergency Department patients presenting with chest

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Purpose: This study was performed to evaluate the efficacy of the HEART score, a tool incorporating History, ECG, Age, Risk factors and Troponin to risk stratify patients presenting to the Long Beach Memorial Emergency Room (ED) with chest pain. Each of the five HS components is assigned 0-2 points, e.g. 2 for a history highly suspicious of ischemia and 0 for slightly or non-suspicious, yielding a total score of 0-10. Previous investigations have found a HS of ≥ 3 to predict a low risk of major adverse cardiac events, allowing such patients to be safely discharged from the ED and receive outpatient evaluation as needed.

Methods: Using anonymized data from a 2016 Quality Improvement project database, 30-day return to ER, cardiac consultation and stress test utilization were compared between the 175 (35.9%) patients in whom the ED physician calculated a HS compared to the 312 patients (64.1%) in whom it was not calculated.

Results: Patients receiving a HS experienced a 30-day ED return rate of 1.7% (3/175) vs. 6.4% (20/312) of those without a HS ($p=0.02$). Cardiac consultations were obtained in 2.4% (2/83) of patients with a HS ≥ 3 vs. 44.9% (31/69) of patients with a HS ≥ 4 ($p<0.001$). Patients with a HS ≥ 3 underwent stress testing 0% of the time (0/83) vs. 43.5% (30/69) of those with a HS ≥ 4 ($p<0.001$).

Conclusion: Use of the HEART score decreased 30-day ED return and improved resource utilization with more appropriate use of cardiac consultation and stress testing.