Introduction: While out-of-hospital cardiac arrest (OHCA) is associated with worse in-hospital outcomes following acute myocardial infarction (MI), post-discharge mortality and health care utilization of elderly patients who survive hospitalization have not been well described. Understanding their long-term prognosis has implications for resource allocation for managing this growing population.

Methods: Using linked NCDR ACTION-Registry GWTG and Centers for Medicare and Medicaid Services data, we analyzed 54,860 patients (mean age = 76.6) at 545 US hospitals with MI who survived to hospital discharge between April 2011 to December 2012. After excluding hospice patients (n=1,444), rates of observed 1-year mortality post-discharge were computed using the Kaplan-Meier method. Multivariable Cox models were used to examine the associations between OHCA and mortality or all-cause readmission within 1 year post-discharge.

Results: Compared with elderly MI survivors without OHCA (n=54,219), those with OHCA (n=641) were younger, more likely to be male and smokers, but less likely to have diabetes, heart failure, or prior revascularization. OHCA patients presented to the hospital more often with STEMI and cardiogenic shock, and were more likely to experience adverse in-hospital events compared to patients without OCHA. Despite this, OHCA was associated with similar unadjusted (Figure, p=0.17) and adjusted 1-year post-discharge mortality (adjusted HR 0.87, 95% CI, 0.67 - 1.13) and lower combined unadjusted (44.0% vs. 50.0%, p=0.033) or adjusted 1-year mortality or all-cause readmission (adjusted HR 0.83, 95% CI, 0.71 - 0.96).

Conclusions: Elderly survivors of MI complicated by OHCA have similar long-term survival and lower rates of healthcare utilization at 1 year post-discharge compared to those without OHCA. These findings support efforts to optimize pre- and intra- hospital processes of care to improve outcomes of elderly OHCA patients.
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