
Key Points:

1) Accurate estimation of favorable neurological survival after in-hospital cardiac arrest could provide critical information for physicians, patients, and families.

2) Within GWTG-Resuscitation, the authors developed a simple prediction tool (the Cardiac Arrest Survival Post-Resuscitation In-hospital [CASPRI] score) for favorable neurological survival in patients successfully resuscitated from an in-hospital cardiac arrest. This score had excellent discrimination and calibration.

3) Eleven variables were associated with favorable neurological survival: younger age, initial cardiac arrest rhythm of ventricular fibrillation or pulseless ventricular tachycardia with a defibrillation time of <2 minutes, baseline neurological status without disability, arrest location in a monitored unit, shorter duration of resuscitation, and absence of mechanical ventilation, renal insufficiency, hepatic insufficiency, sepsis, malignancy, and hypotension prior to the arrest.

4) The prediction tool was able to identify patients across a wide range of rates of favorable neurological survival. For instance, patients in the top decile had a 70.7% probability of surviving with favorable neurological outcome, while patients in the bottom decile had only a 2.8% probability.

5) We believe this tool is simple to use at the bedside, addresses a critical unmet need for better prognostication after cardiac arrest, and has the potential to enhance communication with patients and families.

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Dr. Chan is an associate professor of medicine at the Mid America Heart Institute and the University of Missouri-Kansas City. He is a nationally recognized leader in cardiovascular outcomes research, serving on multiple national committees on clinical guidelines and registries. His innovative research has focused on improving the appropriate use of technology in a manner that is cost-efficient, optimizes patient outcomes, improves quality, and reduces disparities. Using robust statistical methods, he has conducted a number of clinical epidemiology and cardiovascular health outcomes research investigations related to cardiovascular devices, in-hospital resuscitation, quality of care, and appropriateness of care. His work is well-known and frequently cited in the cardiac arrest and resuscitation community, and he has laid the groundwork for better understanding the appropriate use of percutaneous coronary interventions in routine clinical practice.

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