

Is it time for regional cardiovascular emergency care systems across the US?

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Experts are proposing a new model of care collaboration to diagnosis, treat and follow patients who present with various emergent cardiovascular conditions which require rapid, resource-intensive care and confer a high risk of mortality, in an article published April 24 in *Circulation*. Specifically, cardiovascular emergencies, such as ST-segment elevation myocardial infarction (STEMI), non-STEMI/unstable angina, out-of-hospital cardiac arrest (OHCA), acute aortic dissection (AAD), abdominal aortic aneurysm (AAA), stroke and acute decompensated heart failure, may benefit from regionalized systems of care.

Over the past decade, the Minneapolis Heart Institute (MHI) at Abbott Northwestern Hospital has implemented regional systems of care for STEMI, OHCA, AAD, non-STEMI and AAA, instituting clinical programs and a supportive network that reflect a burgeoning framework of a regional cardiovascular emergencies system. Regional systems of care such as these have helped lead to the formation of the nationwide program Mission Lifeline initiative from the [American Heart Association](#), which has developed certification criteria for STEMI referral and receiving centers.

"Through our work implementing guideline driven protocols for cardiovascular systems of care, we have learned that up to 20% of patients treated for these diagnoses will require more than one protocol," said the study's co-author Craig E. Strauss, MD, MPH, a cardiologist at MHI and physician researcher with the Minneapolis Heart Institute

Foundation. For example, a STEMI patient also may experience an OHCA, and require therapeutic hypothermia. "There are commonalities across the cardiovascular emergencies and there is value in bringing those together under one umbrella."

The model, proposed in this article, for a cardiovascular emergency system is a series of clinical programs anchored by a cardiovascular emergency receiving center and fortified by an integrated network of partnered [community hospitals](#) and EMS providers, as well as a landscape of infrastructure elements that provide essential center- and system-level support.

Strauss stressed that rapid diagnosis, effective care coordination with the local EMS providers and physicians, and appropriate follow-up care are among the most important components of implementing a regional system of care. "Particularly with managing patients after an acute cardiovascular event, caregivers must communicate and educate patients about appropriate follow up with their local providers, as well as the importance of medication adherence, both of which have been shown to reduce readmissions," he said.

The authors acknowledged that the current U.S. healthcare system is "fragmented and inefficient," which has historically created barriers to rapid diagnosis and treatment at all levels of cardiovascular care. To overcome these challenges, they recommended the implementation of regional cardiovascular emergency systems that have the potential to improve clinical outcomes; to provide ongoing education for patients, providers and the community; and to serve as a foundation for cost-effective care through the future development of cardiovascular accountable care organizations.

Provided by Minneapolis Heart Institute Foundation

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