

Program works to improve global heart attack care

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The American College of Cardiology's (ACC) Global Heart Attack Treatment Initiative (GHATI) had measurable positive impacts on care delivery for heart attacks in low- and middle-income countries,

according to data from the program's first year. Results were presented at the ACC's 70th Annual Scientific Session.

Globally, more than 17 million people die each year from cardiovascular disease. Three-quarters of these deaths take place in low- and middle-income countries, which annually see about 3 million ST-elevation myocardial infarctions (STEMIs), the deadliest type of [heart](#) attack in which an artery in the heart is completely blocked. While a person who suffers a heart attack in the U.S. or Europe has a 95-97% chance of survival, the odds are significantly worse in low- and middle-income countries, where the chance of survival is 80-90%.

ACC launched GHATI in 2019 to improve heart attack outcomes in low and middle-income countries by encouraging adherence to guideline-directed medical therapy. By the end of its first year, the program had tracked STEMI treatment metrics and outcomes for more than 2,000 patients at 18 medical centers in 13 countries on four continents. Overall, the data reveal that around 90% of hospital admissions for a heart attack adhered to guideline-directed [medical therapy](#); the study also documented improvements in several key metrics over the course of the year.

"It is obvious that there are chances to improve the systems and lower rates of cardiovascular death in low- and middle-income countries, and indeed in all countries," said Benny J. Levenson, MD, Ph.D., of CV Center Berlin-Charlottenburg, Vivantes Klinikum Am Urban/Berlin in Germany and immediate past chair of GHATI. "We were pleased that the results, at one year, were heading in the right direction. We intend to continue to grow this program to be a model for many other countries to improve systems of care for heart attack and ultimately make a big impact on reducing mortality."

The [quality improvement program](#) brings ACC experts from around the

world, including members of the College's Assembly of International Governors, together with cardiology teams at participating institutions to establish systems for tracking patient encounters and collecting data on outcomes. Over the course of the year, the average time patients spent in transit to the hospital decreased by 38 minutes; cardiac arrest upon arrival decreased by 4.6%; and the time from first medical contact to the use of a device to open blocked arteries improved by 28%. All these factors are known to improve outcomes after a [heart attack](#).

While the study is not a [randomized controlled trial](#) and cannot definitively attribute the improvements to the program, feedback from participants and a robust body of previous research on quality improvement suggests the program has helped to encourage positive change, according to the researchers.

"The benefit to participating institutions starts with participating," Levenson said. "Places that have never collected data are now doing so. This leads to a culture change, because people and institutions learn to look closely at their practices and discuss their results with others. Just by gathering data, we can start to see a positive effect."

The results suggest that doctors in low- and [middle-income countries](#) are generally familiar with ACC's treatment guidelines and often show high adherence to them. However, systemic factors outside of the hospital environment, such as the availability of ambulances and emergency-response systems, likely still have a substantial impact on outcomes and may be challenging to change, Levenson said.

Researchers said the program will continue to expand into more sites and countries, including top-performing medical centers and higher-income countries. "Clinicians on cardiology care teams are by nature competitive—we have an internal drive to continue to improve metrics and outcomes," Levenson said. "We know from many years of

experience that even the best can improve."

The ACC GHATI Work Group is led by GHATI Chair Cesar Herrera, MD, FACC, the Americas Representative, ACC Assembly of International Governors, and director CEDIMAT Cardiovascular Center in Santo Domingo, Dominican Republic, and B. Hadley Wilson, MD, FACC, chair-elect of the ACC Governance Committee and a cardiologist at Sanger Heart and Vascular Institute.

More information: [ACC.org/ghati](https://acc.org/ghati)

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