

# Survival benefit seen for some patients when cardiologists are away at academic conferences

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Human heart. Credit: copyright American Heart Association

Heart attacks don't happen on a schedule. So how do patients fare if they suffer a heart attack while many cardiologists are away at academic meetings or research conferences?

The answer depends on the type of heart attack, according to new research from Harvard Medical School.

According to new research from Harvard Medical School, published March 9 in the *Journal of the American Heart Association*, heart attack sufferers who receive treatment during periods when interventional cardiologists are away at academic conferences are more likely to survive in the month after their heart attack than [patients](#) receiving treatment during matched days in the weeks surrounding the conferences.

The overall benefit in survival was substantial enough to get the attention of physician-researcher Anupam Jena, lead author of the study.

"Many medical interventions deliver no mortality benefit, and the fact that mortality actually falls for [heart attack patients](#) during these conference dates raises important questions about how care might differ during these periods," said Jena, who is the Ruth L. Newhouse Associate Professor of Health Care Policy at Harvard Medical School and a physician at Massachusetts General Hospital.

This is not the first time Jena has tackled this line of scientific inquiry. In 2015 Jena and colleagues set out to answer this question, expecting that they would find either no change if the hospitals had enough skilled doctors to cover for the cardiologists who were away at big national cardiology conferences, or a slight increase in mortality, if staffing challenges caused the quality or quantity of care to dip.

Jena said he was surprised to find in that first study that instead of doing worse, patients fared better for acute cardiovascular conditions such as cardiac arrest and heart failure, on the dates of the American Heart Association and the American College of Cardiology meetings than they did on matched dates surrounding those events. The counterintuitive

findings suggested that cardiologists who attend the meetings are more prone to using intensive interventions for their patients, and that patients did better with less intensive treatment.

In his latest study, Jena takes a closer look at a more focused physician population, looking for changes in patient mortality on the dates of Transcatheter Cardiovascular Therapeutics, the world's largest interventional cardiology meeting. Interventional cardiologists specialize in minimally invasive treatment of heart attacks, which involves accessing the heart through a vessel in the groin or arm rather than through open-heart surgery. This approach uses a tiny wire mesh, or stent, to open up a blocked heart artery, and is the most commonly used therapy for treating patients in the throes of a heart attack caused by a blocked artery.

This study's focus on a specific condition and a specific group of doctors who primarily and routinely treat this condition overcame a limitation of the 2015 study, which included cardiologists of all types.

The new analysis revealed a pattern mirroring the findings of Jena's earlier research: A decided survival benefit for patients treated on meeting dates over those treated on nonmeeting dates. Overall, 15.3 percent of patients who went to the hospital with a heart attack on the dates of the meeting died within 30 days of admission, compared with 16.7 percent of patients admitted on nonmeeting dates.

The improved survival outcomes were driven primarily by a group of patients with a specific type of [heart attack](#) that does not require immediate stenting. In these patients, who did not undergo stenting, 16.9 percent of those hospitalized during meeting dates died within 30 days of admission, compared with 19.5 percent of those who received care on nonmeeting dates.

The differences may emanate from different nonprocedural skills of physicians who stay behind on meeting dates. Indeed, patients who had heart attacks during meeting dates were equally likely to receive coronary stenting compared to patients who had [heart](#) attacks on nonmeeting dates, and mortality reductions were primarily observed among patients who did not receive stents. For patients who don't undergo stenting, mortality risk likely depends on choosing the right cardiac medicines and also accurately identifying and treating concurrent illnesses that may affect the risk of dying, such as certain types of infectious diseases, Jena said.

The findings suggest that while the doctors who stayed were equally skilled at stenting as doctors who attended the meetings, those who stayed may have been better at nonprocedural care, Jena said.

"If doctors focus their attention on a particular kind of procedure, they might not develop other clinical skills that are as important to influencing outcomes as is knowledge of a specific procedure," Jena said. "Treating a cardiac patient isn't just about cardiac issues—it's about other factors that the patient brings to the hospital."

The researchers found no age or sex differences between physicians who attended and those who did not attend interventional cardiology meetings. However, they did observe that the doctors who attended these meeting performed more stents, were much more focused on publishing research and more likely to run clinical trials than their peers who stayed behind.

"To be clear, these aren't academics who just run research programs," Jena said. "They also do a lot of clinical care."

So what is it that makes the outcomes for patients treated by these two groups of doctors markedly different? Without detailed data about the

clinical profiles of patients seen on meeting and nonmeeting dates, Jena said it would be hard to say for sure what the true differences were between the groups.

"Which doctor treats you does matter. The types of doctors who attend these meetings seem to provide different care, at least for a subgroup of patients," Jena said. "This is an unfortunate paradox given that professional conferences are designed to actually makes us better physicians and improve the care we deliver."

Many open questions remain, however. The most critical among them may be: What do the [doctors](#) who stay home during meetings do differently to achieve superior results and what can their meeting-attending colleagues learn from them to boost their performance?

"What we really want to know is how we can close the gap in outcomes and save more lives," Jena said.

**More information:** *Journal of the American Heart Association* (2018). [DOI: 10.1161/JAHA.117.008230](https://doi.org/10.1161/JAHA.117.008230)

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