

Researchers advocate better access to angioplasty treatment

November 30 2012



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New research from the United Kingdom has found that primary angioplasty does increase the survival rate of heart attack patients. The Imperial College London researchers said recent studies examining the role of specialist heart attack centres generated misleading results, because physicians tend to allocate the best care to high-risk patients.



They have discovered that the lack of benefit indicated in clinical records is an outcome of the sickest patients being sent to the specialist centres, effectively skewing the data. The finding was recently presented in the journal *Circulation: Cardiovascular Quality and Outcomes*.

Physicians in the United Kingdom usually send most <u>heart attack</u> <u>patients</u> to specialist centres for primary angioplasty, an operation that reopens blocked <u>arteries</u>. Randomised trials showed that angioplasty gives patients a greater chance of surviving than drug treatment alone. However, past studies based on 'real-world' data indicate that patients given an angioplasty do not fare better. For the purposes of their study, the team from Imperial College London took the bias of skewed data into account, observing that primary angioplasty cuts the death rate from heart attacks by 22 %.

According to the researchers, their data confirm that heart attack centres are effective and should be more widely available. The data show that 82 % of heart attack patients in England and 30 % in Wales have access to primary <u>angioplasty</u>. They also found wide discrepancies in access between regions.

'There has been some debate in the cardiology community about whether it is worthwhile to run specialist heart attack centres, despite evidence from clinical trials that they save lives,' said co-author Dr Iqbal Malik from the National Heart and Lung Institute at Imperial College London. 'This study resolves an important question. We must strive to make sure everyone in the UK has access to the best <u>emergency treatment</u> in the event of a heart attack.'

The team cautioned that in today's world, physicians who treat very sick patients tend to give them the most effective possible treatment. Called 'allocation bias', this phenomenon is good medical practice but can make 'comparative effectiveness' research unreliable. Adjusting for this bias is



hard because doctors may base their decisions on many features that are difficult to document. So the researchers developed a method to help their peers detect when a disease is vulnerable to this form of bias in evaluation of its treatments.

'Comparing treatments based on clinical records will always be hindered by the good wisdom of the first-line doctors, who choose the most effective therapy for the most sick patients,' explained Dr Sayan Sen from Imperial College London, the lead author of the study. 'We demonstrate that decisions regarding the therapy of <u>heart attack</u> patients should be tested in the most reliable way, namely a randomised trial, and should not rely on registries.'

More information: Sen, S. et al., 'Why does primary angioplasty not work in registries? Quantifying the susceptibility of real-world comparative effectiveness data to allocation bias', *Circulation: Cardiovascular Quality and Outcomes*, 2012. <u>doi:10.1161/CIRCO</u>

Provided by CORDIS

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