

Simple test in the ambulance saves lives after heart attack, new study finds

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A new study from the University of Surrey, published today in the journal *Heart*, has identified a positive link between the survival of heart attack patients and the use of an electrocardiogram (ECG), by ambulance crews.

Researchers, funded by the British Heart Foundation (BHF), analysed data from almost half a million adults admitted with a heart attack to hospitals in England and Wales, noting whether patients who came to [hospital](#) by ambulance had had an ECG test or not.

The results showed that the number of patients who died within 30 days of hospital admission was significantly lower when an ECG test had been carried out by ambulance crews. The study also revealed that a third of patients admitted to hospital with a heart attack are not having the test in the ambulance, with certain groups of patients, including women, the elderly and people from black and minority ethnic groups, less likely to have an ECG. A further important finding from this study was that having an ECG in the ambulance was also the strongest predictor of a patient receiving treatment to reopen a blocked coronary artery. The use of this treatment is proven to reduce heart damage and improve the survival of patients.

Lead author, Professor Tom Quinn from the University of Surrey, said: "Every NHS ambulance is equipped with an ECG machine. While there is evidence from other countries that having an ECG test in the [ambulance](#) leads to faster treatment, our study is the first to determine

that the test is actually associated with improved survival after a heart attack.

"Ambulance services in the NHS compare favourably to countries such as the USA, where only a quarter of such patients get an ECG, but we need to do more to ensure that the groups we identified as not getting the test have improved care.

"Hopefully our results will reinforce to paramedics the importance of carrying out an ECG when they suspect a heart attack, as well as flag up the types of patients who are currently less likely to receive this test, leaving them more vulnerable to poor outcomes."

Dr Mike Knapton, Associate Medical Director at the BHF, said: "This research suggests that if someone suffering a suspected heart attack has a simple ECG test before they reach hospital, it can help save their life. The test helps paramedics provide the most appropriate treatment outside hospital and means that hospital staff are more prepared when the patient arrives.

"The results, made possible by studying huge numbers of medical records, clearly support existing guidelines on using an ECG test before patients reach hospital. So it's vital that all [patients](#) who show signs of a [heart attack](#) have this simple [test](#)."

Provided by University of Surrey

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