

Variation in outcome of hospitalised patients with out-of-hospital cardiac arrest from acute coronary syndrome: a cohort study

Keith Couper,^{1,2} Peter K Kimani,¹ Chris P Gale,^{3,4} Tom Quinn,⁵ Iain B Squire,⁶ Andrea Marshall,¹ John JM Black,⁷ Matthew W Cooke,¹ Bob Ewings,⁸ John Long⁸ and Gavin D Perkins^{1,2*}

¹Warwick Medical School, University of Warwick, Coventry, UK

²Academic Department of Anaesthesia, Critical Care, Pain and Resuscitation, Heart of England NHS Foundation Trust, Birmingham, UK

³Leeds Institute of Cardiovascular and Metabolic Medicine, University of Leeds, Leeds, UK

⁴York Teaching Hospital NHS Foundation Trust, York, UK

⁵Faculty of Health, Social Care and Education, Kingston University, London and St George's, University of London, London, UK

⁶University of Leicester and Leicester NIHR Cardiovascular Research Unit, Glenfield Hospital, Leicester, UK

⁷South Central Ambulance Service NHS Foundation Trust, Otterbourne, UK

⁸PPI representative

*Corresponding author G.D.Perkins@warwick.ac.uk

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Plain English summary

Patient survival factors in out-of-hospital cardiac arrest

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Plain English summary

Each year, approximately 30,000 people have an out-of-hospital cardiac arrest (OHCA) that is treated by UK ambulance services. Cardiac arrest is often caused by a condition that affects blood supply to the heart (e.g. a heart attack). At present, less than 1 in 10 OHCA patients survive to leave hospital following OHCA, but this varies significantly across the country.

In this research study, we used data about OHCA patients from the Myocardial Ischaemia National Audit Project (MINAP) registry to identify reasons why survival may vary. The MINAP registry collects data about patients admitted to hospital who have had a heart attack or other condition that affects blood supply to the heart. We used statistical techniques to try to identify which factors were associated with hospital survival following OHCA.

We analysed information from 17,604 patients who had an OHCA between 2003 and 2015, and who were included in the MINAP registry. The overall rate of patients who survived to leave hospital was 71%. We found that survival rates by hospital did vary, but we could explain only some of this variation. Treatment with a drug or procedure to reopen blocked blood vessels in the heart reduced the likelihood of dying in hospital. However, these treatments require admission to a specialist hospital and seem to benefit only patients who have a specific type of heart attack. Patients who did not have that type of heart attack did not seem to benefit from admission to a specialist hospital, and could possibly be safely treated at the nearest hospital.

This research study has helped us to better understand which patients, following OHCA, may benefit from care in specialist hospitals, but the best treatment for some patients remains uncertain. It will be necessary to conduct research in the future to help understand the best treatment for these patients.

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