Paramedic3 Study – Press Release

**Devon Air Ambulance take part in lifesaving research**

**Study Finds Bone Injections Don’t Improve Survival Over IV in Cardiac Arrest Treatment**

Devon Air Ambulance is proud to have taken part in lifesaving research alongside The University of Warwick in partnership with NHS Ambulance Services. The research found that administering lifesaving drugs for cardiac arrest directly into the bone does not improve survival rates compared to the standard intravenous (IV) method.

Every year in the UK, over 30,000 individuals experience sudden cardiac arrest, with survival depending heavily on immediate, effective treatment.

Current guidelines advise paramedics to inject drugs into a vein, which can take several minutes before drugs can be administered. An alternative way (intraosseous (IO)) is to give drugs through a needle placed in an arm or leg bone.

The use of this alternative approach has been increasing in ambulance services globally with some studies suggesting it might allow drugs to be given more quickly, but there was uncertainty as to whether it would increase the number of patients that survived following cardiac arrest.

The PARAMEDIC-3 trial was conducted by ten NHS ambulance services across England and Wales, and Devon Air Ambulance, to determine if injecting drugs directly into a bone could provide a faster and potentially more effective alternative to intravenous administration.

Dr Keith Couper, Co-Chief Investigator from The University of Warwick says, ‘The findings of the PARAMEDIC-3 study will be extremely important in informing how we treat adult cardiac arrest patients in the future. The results clearly show that giving life-saving cardiac arrest drugs into a bone rather than into a vein does not save more lives following cardiac arrest.’

The study randomly assigned 6,082 adult cardiac arrest patients to receive drugs through either the bone (intraosseous) or vein (intravenous) routes.

**Key Findings of PARAMEDIC-3 Trail**

* **Time of Drug Delivery:** The study found no significant difference in the time required to administer drugs using the intraosseous or intravenous route.
* **Survival and Neurological Outcomes:** Patients in both the intraosseous and intravenous groups showed similar outcomes, with no significant differences in the rates of survival at 30 days or neurological recovery.

Throughout the study, a dedicated patient advisory group helped shape the project, ensuring public and patients were informed of the study processes and decisions. Ongoing follow-ups are now exploring patient recovery in the months following cardiac arrest to assess longer-term outcomes.

Nigel Lang, Advanced Paramedic Critical Care at Devon Air Ambulance says, ‘Evidence shows that care providers who are research-active have better patient outcomes, even patients who are not involved in trials themselves benefit, have more confidence in staff, and are better informed about their condition.

‘It was important for Devon Air Ambulance to help answer the question this trial asked, as on average, we respond to one cardiac arrest daily. We are extremely proud to have been accepted as a research site in collaboration with the University of Warwick, and our team of paramedics did an outstanding job contributing to the results of this clinical trial. The results have been published in The New England Journal of Medicine, which is one of the highest-ranking clinical journals.’

Professor Gavin Perkins, Co-Chief Investigator from The University of Warwick says, ‘The PARAMEDIC-3 study was only possible due to the generosity of the patients that took part and the work of the ambulance services who delivered the study.

‘We would like to thank both the patients that took part and the ambulance services. The UK has established a strong track record in delivering world-leading ambulance service research that improves the care and treatment of the patients that they serve.’

Funded by the National Institute for Health and Care Research ([NIHR](https://www.nihr.ac.uk/)) Health Technology Assessment Programme, the findings of this large-scale study will inform international clinical guidelines on the most effective emergency drug administration methods for cardiac arrest patients.

The full study can be found [**here**](https://www.nejm.org/doi/full/10.1056/NEJMoa2407780).

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**Notes to Editors**  
  
The University of Warwick is one of the UK’s leading universities with over twenty-eight thousand students from 147 countries. Ranked 9th in the UK by The Guardian University Guide, it has an acknowledged reputation for excellence in research and teaching, for innovation, and for links with business and industry. The recent Research Excellence Framework classed 92% or it’s research as ‘world leading’ or ‘internationally excellent’. The University of Warwick was awarded University of the Year for Teaching Quality by The Times and Sunday Times.  
  
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* Partnering with patients, service users, carers and communities, improving the relevance, quality and impact of our research;
* Attracting, training and supporting the best researchers to tackle complex health and social care challenges;
* Collaborating with other public funders, charities and industry to help shape a cohesive and globally competitive research system;
* Funding applied global health research and training to meet the needs of the poorest people in low and middle income countries.

NIHR is funded by the Department of Health and Social Care. Its work in low and middle income countries is principally funded through UK international development funding from the UK government.