

Trauma drug first for civilian ambulance service

December 2 2011

A drug currently used to reduce bleeding in operating theatres and in trauma in the armed forces is set to be used by a civilian ambulance service for the first time.

This is thanks to collaboration between the South West [Ambulance Service](#) NHS Foundation Trust, hospitals across the South West of England and researchers from the Peninsula College of Medicine and Dentistry.

The Peninsula College of Medicine and Dentistry is a joint entity of the Universities of Exeter and Plymouth and the NHS in the South West of England. The collaboration is supported by PenCLAHRC, the National Institute for Health Research (NIHR) Peninsula Collaboration for Leadership and Applied Health Research and Care.

Tranexamic Acid (TXA) is a synthetic derivative of the amino acid lysine. It inhibits fibrinolysis, the breaking down of [blood clots](#), which can worsen bleeding in situations such as major trauma.

The National Institute for [Health Research](#) (NIHR) funded a large international study (the CRASH-2 trial, published in the [Lancet](#) in June 2010) which showed that, if used within three hours after trauma, TXA can reduce the risk of death from bleeding by as much as 30 per cent. The drug was quickly moved into routine practice by trauma teams in the military but the challenge has been how best to get this potentially effective intervention into practice in the NHS where it is currently

seldom used. Getting the drug to all appropriate [trauma patients](#) could save around 400 lives per year in the UK.

The South West Ambulance Service worked with a team from PenCLAHRC and emergency physicians from acute hospitals across the South West to investigate the feasibility of using TXA for civilian trauma. A review of the evidence suggested high levels of effectiveness and very low risk of side-effects. It was concluded that the most effective method would involve the drug being given by [paramedics](#) using a protocol agreed with the Emergency Departments. TXA is extremely cheap - an adult requires two 500mg ampoules of TXA at a cost of £1.55 for each ampoule. In the South West it is estimated that the cost in year one would be just £2,560, with the recurrent cost from year two and beyond equating to £3,587 a year with the potential to save many lives and reduce the burden of trauma related disability.

Following liaison with emergency departments at all acute hospital trusts in the South West, TXA will be introduced to ambulance crews in the South West from 1st December 2011 with an anticipated roll-out period of three months. All emergency ambulances across Devon, Cornwall and Isles of Scilly, Somerset and Dorset will carry the life-saving medicine. It is hoped that TXA will be introduced to other UK ambulance Trusts during 2012.

Professor Stuart Logan from the Peninsula College of Medicine and Dentistry, who is also director of PenCLAHRC, commented: "There is often a delay of years between evidence being published and its use in practice, but this is a great example of what the NHS at its best can do. NIHR, the research arm of the NHS, funded the original trial which showed that TXA is effective and also funds PenCLAHRC which helped bring together the collaboration which is driving implementation into practice. The South West is lucky in having an Ambulance Trust with a really innovative approach, a commitment to evidence-based practice

and a close partnership with the acute trusts and with the College. We are delighted that strong local partnership has resulted in this being the first region to get this effective intervention into widespread use with the potential for substantial savings in lives, disability and costs.”

Adrian South, Deputy Director of Clinical Care for the ambulance service commented: “We are extremely pleased to be able to offer this intervention to our patients who have experienced major trauma. By working in collaboration with PenCLAHRC, we have been able to introduce the medicine far earlier than would have otherwise have been possible. Our clinicians have a strong record of leading the way in the pre-hospital management of major haemorrhage, starting with the introduction of combat arterial tourniquets in 2005.”

Provided by Universities of Exeter

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