

Results We reviewed 4,276 records and included 58 in the final review.

We identified eleven different types of initiative then developed a 3 domain framework based on their characteristics to describe the underlying theory of how they worked;

1. Aiding decision making process
2. Providing most effective therapies
3. Providing most appropriate response

Only eight studies contained evidence of initiative effectiveness;

- 5 showed improved staff confidence
- 3 showed improved patient outcomes

Four studies investigated the experiences of those impacted by the initiatives, only two of which included the patient voice. In these, patients were broadly positive about the initiatives and the care they had received.

Conclusion Numerous initiatives have been developed to improve pre-hospital end-of-life care delivered by ambulance services, however evidence to show their impact on patient outcomes is limited. Further research to understand patient experiences of care provided by the ambulance service would be beneficial to inform the ongoing development of initiatives in the future.

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DOES THE USE OF BLOOD PRODUCTS IN A PRE-HOSPITAL SETTING INCREASE SURVIVAL TO ONE MONTH IN TRAUMA PATIENTS? A SYSTEMATIC REVIEW

Camila Gough*, William Page*, Christopher M Smith. *Warwick Medical School, Coventry, UK*

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Background Major haemorrhage is a leading cause of mortality for the traumatically-injured patient. While it is best practice to replace lost blood with blood products in the hospital setting, it is currently not established practice to transfuse hypovolaemic patients with blood products at the scene of trauma. The evidence has been lacking to support this practice, but the findings of a major trial published in 2022, in combination with other studies in recent years, add to the evidence base and can now help to answer the question of whether the practice of pre-hospital transfusion improves mortality outcomes. The aim of our project was to analyse the evidence for the use of blood products in trauma patients in a pre-hospital setting and ascertain its impact, if any, on survival.

Methods We performed a systematic review of the literature for studies where the effects of transfusing blood or blood products to adult trauma patients in the pre-hospital setting were compared to those of infusing crystalloid fluids alone. Primary outcome was one-month mortality. We obtained measures of effect for each study by calculating risk ratios with 95% confidence intervals. We performed a meta-analysis to assess pooled effect size.

Results Analysis performed on a total of 1,393 patients across six studies (four randomised controlled trials, one cohort study and one case-control study) showed no statistically significant change in one-month mortality for the blood products group compared to the crystalloid fluid-only group (pooled risk ratio = 0.9, 95% CI = 0.77, 1.04). This result was similar to our

separate analysis of the randomised controlled trials alone (pooled risk ratio = 0.91, 95% CI = 0.77, 1.08).

Conclusion Based on data from the currently available literature, the administration of blood products to patients with haemorrhagic trauma in the pre-hospital setting does not lead to a statistically significant benefit in one-month survival when compared to resuscitation with fluids alone.

* Camila Gough and William Page contributed equally to this work.

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DISPATCHER-ASSISTED AED USE: A SCOPING REVIEW

Lucas Snow, James Whiting, Christopher Smith. *Warwick Medical School, Warwick University, Coventry, UK*

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Background Early defibrillation of out-of-hospital cardiac arrest (OHCA) patients is a key step in the chain of survival. Public-access defibrillation is an important area where emergency medical dispatchers can have an influence on guiding bystanders to automated external defibrillators (AED) and using them safely and effectively to deliver a shock.

Methods MEDLINE, EMBASE and Cochrane libraries were searched with an electronic search strategy, as well as citation and related article searches. The database search returned 8 studies and a further 12 were identified from related articles, citations, and professional contacts. The studies were a mix of real-life observational and simulations, including randomized controlled simulations.

Results The outcomes assessed were rate of AED retrieval and use, time to shock or first rhythm analysis, AED competence, scripts and specific language, time and distance travelled to shock, and use of video or mobile geolocation assistance. Rates of use and competence were generally higher, and time to shock was lower when bystanders received dispatcher assistance. Voice and video assistance were comparable in terms of outcome. Several studies had a high risk of bias due to the observational nature and some simulations had problems with randomization methods.

Conclusions The review found that dispatcher assistance has the potential to improve several outcomes associated with the rate and quality of bystander AED use. There is a need for further good quality research in this area as early defibrillation by lay people will result in better OHCA survival rates and outcomes.

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EARLY CLINICAL FEATURES AND PORTABLE DEVICES FOR THE PRE-HOSPITAL IDENTIFICATION OF INTRACEREBRAL HAEMORRHAGE: A SCOPING REVIEW

^{1,2}Mohammed Almubayyidh*, ^{1,3}Ibrahim Alghamdi, ^{1,4}Adrian Parry-Jones, ¹David Jenkins. ¹The University of Manchester, Manchester, UK; ²King Saud University, Riyadh, Saudi Arabia; ³King Khalid University, Abha, Saudi Arabia; ⁴Northern Care Alliance NHS Foundation Trust, Salford, UK

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Background Early recognition of intracerebral haemorrhage (ICH) in the pre-hospital setting would facilitate the initiation of important interventions and destination decisions to improve patient outcomes. This scoping review aimed to identify early clinical features and portable devices that can help