

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.

PP50

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*

10.1136/emered-2023-999.49

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.

PP51

DISPATCHER-ASSISTED AED USE: A SCOPING REVIEW

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

10.1136/emered-2023-999.50

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.

PP52

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

10.1136/emered-2023-999.51

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

pre-hospital personnel in distinguishing ICH from other suspected strokes.

Methods MEDLINE, EMBASE, and CENTRAL were searched via Ovid from inception to August 2022 using keywords such as stroke, intracerebral hemorrhage, differential diagnosis, detection, clinical features, prehospital, emergency, imaging, technology, and their associated terms or synonyms. Two independent reviewers screened titles, abstracts, and full-text articles against the eligibility criteria and performed data extraction.

Results Overall, 6,803 articles were screened for applicability. Of these, 25 studies were included in the analysis; 15 studies reported on early clinical features, and 10 considered portable devices. Prior ICH (n=3), as well as severe neurological deficits (n=6) and higher blood pressure levels (n=11) at onset, were found to be associated with the presence of ICH. Alternatively, a history of atrial fibrillation (n=7) and coronary artery disease (n=6) was less common in ICH patients. Five technologies were found for ICH detection: microwave imaging technology, volumetric impedance phase shift spectroscopy, transcranial ultrasound, near-infrared spectroscopy, and electroencephalography. Microwave and ultrasound imaging technologies demonstrated their capability for differentiating ICH from other causes of suspected strokes.

Conclusion This study has discussed potential clinical features for detecting ICH, but a meta-analysis would be useful to provide further insight. Microwave and ultrasound imaging techniques showed promising results in detecting ICH; however, the five technologies are in the early stages of development and need to be tested for their ability to differentiate between stroke subtypes and non-stroke diagnoses.

PP53

A QUALITATIVE STUDY OF AMBULANCE PERSONNEL, CARE STAFF AND SERVICE USERS' EXPERIENCES AND PERCEPTIONS OF EMERGENCY CARE IN CARE HOMES

¹Despina Lapidou, ¹Viet-Hai Phung, ²Ffion Curtis, ^{1,3}Gregory Whitley, ⁴Vanessa Botan, ¹Joseph Akanuwe, ¹Elise Rowan, ⁵Rachael Fothergill, ⁵Tracy McCranor, ¹Susan Bowler, ⁶Maria Kordowicz, ⁷Nicoya Palastanga, ⁷Lissie Wilkins, ³Robert Spaight, ³Elizabeth Miller, ⁶Adam L Gordon, ¹Graham Law, ¹Aloysius Niroshan Siriwardena. ¹University of Lincoln, UK; ²University of Leicester, UK; ³East Midlands Ambulance Service NHS Trust, Lincoln, UK; ⁴Nottingham Trent University, UK; ⁵Lincolnshire Partnership NHS Foundation Trust, Lincoln, UK; ⁶University of Nottingham, UK; ⁷Patient and Public Contributor, Lincoln, UK

10.1136/emered-2023-999.52

Background Medical emergencies in care homes are common and costly, often resulting in calls to emergency services, ambulance attendance, conveyance, and hospital admissions. Over half of emergency transfers to hospital could be prevented with better ongoing care, access to primary care and training of staff. Our aim was to explore ambulance staff experiences of emergencies in care homes.

Methods We employed a qualitative design. The study involved semi-structured interviews with ambulance staff working at the East Midlands Ambulance Service NHS Trust. Data were analysed thematically using a framework approach.

Results We interviewed 15 ambulance staff (including paramedics, technicians, urgent care assistants). Preliminary analysis showed that although good communication with care home staff was considered important, experiences were varied. The importance of good, adequate resident information ready for ambulance staff upon arrival was highlighted.

Regarding the decision-making process, participants reported consulting with everyone involved (care home staff, residents, relatives) and making final decisions based on various factors, including the resident/their family's wishes, medical history, ReSPECT forms, alternative pathways to A&E, and what they considered the most appropriate course of action for the resident. Care home-related factors (access/egress issues; staff training; policies and procedures; and overall quality of care) and Emergency Medical Services-related factors (current pressures on the service; better training needed on working with people with dementia, end-of-life care, etc.; having access to an on-call geriatrician), which impact those who experience emergencies in care homes, were also discussed.

Conclusion This study highlights the main challenges and facilitators that ambulance staff are faced with when dealing with emergencies in care homes. These data present findings of one staff group and triangulation with care home staff, resident and family perspectives would generate further insights. The findings will inform the development of interventions to improve outcomes and experiences of emergencies in care homes.

PP54

PRE-HOSPITAL STAFF EXPERIENCES OF RESPONDING TO SUICIDE AND SELF-HARM: A SEMI-STRUCTURED INTERVIEW STUDY

¹Eamonn Byrne, ¹Louise Doyle, ¹Brian Keogh, ²Niamh Cummins. ¹Trinity College Dublin, Ireland; ²University of Limerick, Ireland

10.1136/emered-2023-999.53

Background Suicidal behaviours and self-harm are associated with an increased risk of suicidal death and make up a significant subset of the mental health calls responded to by ambulance services.

This prehospital response provides access to medical and psychological care for patients in crisis.

A patient's future willingness to engage with services can be compromised by early, healthcare interactions of poor quality. Despite patients and their families describing the quality of prehospital emergency care as 'hit-and-miss', and a reported lack of appropriate prehospital training, related international evidence on the pre-hospital staff experience is lacking.

Methods After ethical approval was obtained, experienced, registered practitioners with the Irish Prehospital Emergency Care Council were asked to participate in an online recorded, semi-structured interview. 53 expressions of interest were received. A purposively selected, maximum variant sample (n=11) consisting of EMTs, Paramedics and Advanced Paramedics was extracted, consented, and interviewed as part of an ongoing mixed methods study.

To gain a deeper understanding of an under-researched area, a descriptive design approach was used. This method will facilitate the collection of straightforward descriptions of studied phenomena that can be used to contribute to change in a practical clinical setting.

An interview guide was designed, and participants were asked about their understanding of and experiences of responding to self-harm and suicidal behaviours. Interviews were transcribed and thematic analysis described by Braun and Clark was facilitated using Nvivo software. Analysis is ongoing.