Welcome to November 2020 issue of the Prehospital Emergency Services Current Awareness Update.

Amber – the home of ambulance service research

amber is available from https://amber.openrepository.com amber contains records of research published by researchers and staff working for NHS ambulance services in England.

To find out more about amber go to the LKS ASE website. If you think your research should be included in amber please contact library@nwas.nhs.uk. We are still adding to amber and hope to have the database complete by December 2020.

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@LksAse tweets the latest paramedic research as it’s published from leading peer reviewed journals.

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Send feedback to Matt Holland, LKS ASE Librarian (on behalf of the National Ambulance Research Steering Group). You can eMail Matt at Matt.Holland@nwas.nhs.uk.

This Current Awareness Update was commissioned by the National Ambulance Research Steering Group comprising of research leads from ambulance trusts in England, Scotland and Wales and other experts and groups supporting prehospital research. The aim of the group is to support the strategic development of ambulance and prehospital research whether leading, collaborating in or using research.

Research and Best Practice

The following research papers have been published in the last couple of months. The papers have been arranged by the topic headings below: (Ctrl & Click on the heading to go straight to that section)

Prehospital Practitioners – Professional Development

Prehospital Emergency Services Current Awareness Update – Issue 86, November 2020
Prehospital Research – Methods and Discussion

Diagnosis & Triage

Patient Profile

Helicopter Emergency Medical Services

On-Scene Interventions

Airway Management, Resuscitation & CPR

Further Research Needed

You may also access papers using your NHS OpenAthens account. Some papers may be available as Open Access.

You can find the complete archive of the .pdf version of Prehospital Emergency Services Current Awareness Update at the link below.

https://ambulance.libguides.com/currentawareness

Prehospital Practitioners – Professional Development

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https://journals.lww.com/jtrauma/Citation/2020/12000/Multidisciplinary_prehospital_critical_care_41.aspx


https://doi.org/10.1177_1460408620974982

https://doi.org/10.1016/j.ajem.2020.09.041

https://doi.org/10.1136/emermed-2019-209124


https://doi.org/10.3928/00220124-20201113-06

https://doi.org/10.29045/14784726.2020.12.5.3.31

https://doi.org/10.1111/1742-6723.13658

https://doi.org/10.1016/j.jen.2020.08.006


Skjærseth, E. Å., et al. (2020). Developing Quality Indicators for Helicopter Emergency Medical Services


Diagnosis and Triage

You may access papers using your [NHS OpenAthens account](https://nhsopenathens.nhs.uk/). Some papers may be available as Open Access.


Fuller, G. W., Goodacre, S., Keating, S., Herbert, E., Perkins, G., Ward, M., Rosser, A., Gunson, I., Miller,


Murphy, C., Silva, N., Fontaine, M. J., & Jackson, B. (2020). Cold weather is independently associated with hypothermia in severely injured trauma patients: [research-article]. *Trauma*. https://doi.org/10.1177_1460408620974492


Schellenberg, Morgan et al. (2020). Longer Prehospital Time Decreases Reliability of Vital Signs in the


**On-Scene Interventions**

You may access papers using your [NHS OpenAthens account](https://nhsopenathens.nhs.uk). Some papers may be available as Open Access.


Airway Management, Resuscitation & CPR
You may access papers using your NHS OpenAthens account. Some papers may be available as Open Access.


https://doi.org/10.1016/j.jemermed.2020.06.022

Krebs, W., et al. (2020). Prehospital Ketamine Use for Rapid Sequence Intubation: Are Higher Doses Associated With Adverse Events? *Air Medical Journal, 0(0).*
https://doi.org/10.1016/j.amj.2020.11.007

https://doi.org/10.1016/j.resuscitation.2020.11.030

Mckenzie, N., et al. (2020). Non-linear association between arterial oxygen tension and survival after out-of-hospital cardiac arrest: A multicentre observational study. *Resuscitation, 0(0).*
https://doi.org/10.1016/j.resuscitation.2020.11.021

McLachlan, S., et al. (2020). Scoping the Demand for Night Operation of Essex & Herts Air Ambulance: A Prospective Observational Study. *Air Medical Journal, 0(0).*
https://doi.org/10.1016/j.amj.2020.11.008

https://doi.org/10.1016/j.ajem.2020.08.097

https://doi.org/10.1016/j.jen.2020.10.003

https://doi.org/10.1016/j.ajem.2020.09.058

Sanfilippo, F., et al. (2020). Cerebral regional oxygen saturation during cardiopulmonary resuscitation and return of spontaneous circulation: A systematic review and meta-analysis. *Resuscitation, 0(0).*

Tan, B. K. K., et al. (2020). Clinical evaluation of intravenous alone versus intravenous or intraosseous access for treatment of out-of-hospital cardiac arrest. *Resuscitation, 0(0).*
https://doi.org/10.1016/j.resuscitation.2020.11.019

https://doi.org/10.1016/j.jjcc.2020.11.013

Tram, J., et al. (2020). Percutaneous mechanical circulatory support and survival in patients resuscitated from Out of Hospital cardiac arrest: A study from the CARES surveillance group. *Resuscitation, 0(0).*
https://doi.org/10.1016/j.resuscitation.2020.10.046

https://doi.org/10.1016/j.resuscitation.2020.09.043

Vanwulpen, M. (2020). Do manual chest compressions provide substantial ventilation during prehospital
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Further Research Needed …

You may access papers using your NHS OpenAthens account. Some papers may be available as Open Access.


Post-traumatic stress disorder (PTSD) is more common in paramedics than in the general population because of the stressful and distressing nature of their work. Forms of PTSD associated with chronic stress and repeated trauma are scarcely researched among paramedics. This is striking as this workforce is potentially more likely to be affected by these types of PTSD. Diagnostic processes are still largely based on acute rather than chronic psychological trauma. PTSD diagnosis has been influenced by sociological perceptions of mental illness and changes in diagnostic criteria. Criteria for the diagnosis of PTSD in the Diagnostic and Statistical Manual of Mental Disorders and the International Classification of Diseases have changed in the past decade, which may facilitate more appropriate diagnoses of PTSD in paramedics. Paramedics often have a complex aetiology of PTSD resulting from experiences of both chronic and acute events. Questionnaires that cover exposure to both individual and repeated stressful events are required to enable further research in the area of PTSD in paramedics.


The aim of this article is to discuss mixed methods in the field of pre-hospital research, highlight its strengths and limitations and provide examples. This article is tailored to clinicians and early career researchers and covers the basic aspects of mixed methods research. We conclude that mixed methods is a useful research design to help develop our understanding of complex clinical problems in the pre-hospital setting.


Background: Recognising acute traumatic coagulopathy (ATC) poses a significant challenge to improving survival in emergency care. Paramedics are in a prime position to identify ATC in pre-hospital major trauma and initiate appropriate coagulopathy management.

Method: A database literature review was conducted using Scopus, CINAHL and MEDLINE.

Results: Two themes were identified from four studies: prediction tools, and point-of-care testing. Prediction tools identified key common ATC markers in the pre-hospital setting, including: systolic blood pressure, reduced Glasgow Coma Score and trauma to the chest, abdomen and pelvis. Point-of-care testing was found to have limited value.

Conclusion: Future research needs to explore paramedics using prediction tools in identifying ATC, which could alert hospitals to prepare for blood products for damage control resuscitation.

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**Conclusion:** The results indicate several areas for improvement within the ambulance trust. Of importance is the application of basic first aid, such as cooling. It is important not only to improve education among staff but also to understand non-compliance. It should be acknowledged that assessment of pain and provision of analgesia demonstrated far higher compliance compared to current pre-hospital evidence. **Several points for education and research have been identified.**


This article aims to provide an exploratory investigation into paramedic experiences of attending cases of miscarriage, sudden and unexpected death in infancy (SUDI) and other forms of neonatal loss. It draws on a background literature review, but focuses primarily on exploring issues raised by paramedics during a structured discussion group on this topic. Existing literature highlights the ways in which baby and infant death is one of the most stressful and challenging areas of paramedic practice. Paramedics participating in our discussion group reinforced this issue, identifying five key areas of concern: baby loss as a rare occurrence, resuscitation, lack of information concerning the post-admissions process, professional closure, and support to parents. **Further research is needed, along with better support and guidelines to assist paramedics with a wide range of issues from resuscitation to bereavement.**

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