



Journal report – srpen 2025

OBSAH

PREHOSPITAL CARE

– clinical trials & RCT & multicenter study

- 1: Brune B, Lemm D, Wolf M, Johland A, Becker L, Szalai C, Bruns N, Brenner T, Dudda M, Herbstreit F. **Pediatric emergency backpacks-effects of using xABCDE-and Broselow-systems on pediatric emergency care.** Eur J Pediatr. 2025 Aug 29;184(9):582. doi: 10.1007/s00431-025-06425-w. PMID: 40879680; PMCID: PMC12397160.
- 2: Aghabarary M, Nemat SZ, Nayeri ND. **Presenteeism and its relationship with resilience among pre-hospital emergency technicians: a multicenter cross-sectional study.** BMC Health Serv Res. 2025 Aug 26;25(1):1132. doi:10.1186/s12913-025-13254-y. PMID: 40859271; PMCID: PMC12382295.
- 3: Babamiri G, Karimiankakolaki Z. **Investigating the impact of crisis management training on clinical decision-making and management of stress factors in the personnel of emergency medical services: randomized controlled trial.** BMC Med Educ. 2025 Aug 20;25(1):1180. doi: 10.1186/s12909-025-07730-6. PMID: 40836232; PMCID: PMC12366106.
- 4: Dayasiri K, Suraweera N, Burhan P. **First-aid practices and pre-hospital care in paediatric snakebites.** BMC Pediatr. 2025 Aug 8;25(1):614. doi: 10.1186/s12887-025-05975-0. PMID: 40781301; PMCID: PMC12333078.
- 5: Baran L, Öztürk H. **The effects of video-based and blended learning on medication dosage calculation skills of paramedic students: A randomized, quasi-experimental study.** Medicine (Baltimore). 2025 Aug 1;104(31):e43651. doi: 10.1097/MD.00000000000043651. PMID: 40760542; PMCID: PMC12323921.
- 6: Olani AB, Eastwood K, Howell S, Bray JE. **Emergency Medical Service Use for Acute Coronary Syndrome in Culturally and Linguistically Diverse Immigrant Populations.** Heart Lung Circ. 2025 Aug;34(8):838-847. doi: 10.1016/j.hlc.2025.01.007. Epub 2025 Jun 6. PMID: 40480873.
- 7: Hernández-Tejedor A, González Puebla V, Corral Torres E, Montero Hernández SI, Caniego Rodrigo C, Vázquez García MI, Camacho Leis C. **Comparison of ventilation modes in non-traumatic out-of-hospital cardiac arrest: SYMEVECA phase 2.** Resuscitation. 2025 Aug;213:110655. doi: 10.1016/j.resuscitation.2025.110655. Epub 2025 May 21. PMID: 40409673.
- 8: Kerolle S, Browne LR, Brazauskas R, Adelgais KM, Chadha K, Chang TP, Harris MI, Lerner EB, Leonard JC, Lowe GS, Magill CF, Nishijima DK, Shah MI, Schwartz HP, Chumpitazi CE; Pediatric



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Emergency Care Applied Research Network (PECARN) Emergency Medical Services Affiliate Consortium. **Racial and Ethnic Differences in ED Analgesia Among Injured Children Transported Via EMS.** *Pediatr Emerg Care.* 2025 Aug 1;41(8):606-611. doi: 10.1097/PEC.0000000000003389. Epub 2025 May 22. PMID: 40401822.

9: Pan C, Li X, Zhang X, Zheng J, Song R, Zhang Z, Chen R, Kan H, Xu F, Chen Y, Meng X. **Association between nitrogen dioxide exposure and out-of-hospital cardiac arrest onset in China: A multicenter, time-stratified, case-crossover study.** *J Hazard Mater.* 2025 Aug 5;493:138341. doi: 10.1016/j.jhazmat.2025.138341. Epub 2025 Apr 22. PMID: 40306250.

10: Martín-Sánchez R, Castro Villamor MÁ, Rabanales-Soto J, Otero de la Torre S, Martínez Fernández FT, Sánchez Soberón I, Sanz-García A, Martín-Rodríguez F. **Threshold-anxiety in medical students performing a prehospital high-fidelity clinical simulation: Randomized clinical trial.** *Am J Emerg Med.* 2025 Aug;94:103-109. doi: 10.1016/j.ajem.2025.04.039. Epub 2025 Apr 21. PMID: 40286524.

PREHOSPITAL CARE

– systematic review & meta-analysis & scoping review

1: Russam GS, Gluyas-Harris J, Aveyard N, Nutbeam T. **Triage of road injury casualties - the role of bystanders: a scoping review.** *Scand J Trauma Resusc Emerg Med.* 2025 Aug 21;33(1):142. doi: 10.1186/s13049-025-01455-7. PMID: 40841948; PMCID: PMC12369110.

2: Gunson IM, Barley C, Rosser A, Bullock L, Gordon AL, Kingstone T, Bucknall M. **Ambulance responses to older adults who have fallen: a systematic review.** *Age Ageing.* 2025 Aug 1;54(8):afaf228. doi: 10.1093/ageing/afaf228. PMID: 40819292; PMCID: PMC12358043.

3: Owen P, Kirby K, Hannah J, Crouch R, Hyde P, Voss S. **Prehospital critical care dispatch: a scoping review (PHASE).** *Scand J Trauma Resusc Emerg Med.* 2025 Aug 14;33(1):140. doi: 10.1186/s13049-025-01450-y. PMID: 40814122; PMCID: PMC12351921.

4: Kendall I, Laermans J, D'aes T, Borra V, McCaul M, Aertgeerts B, De Buck E. **First aid training for laypeople.** *Cochrane Database Syst Rev.* 2025 Aug 12;8:CD015538. doi: 10.1002/14651858.CD015538.pub2. PMID: 40792480.

5: Wells B, Nasreldein A, Larsen K, van Wijck F, Carcel C, Christensen H, Hov MR, Caso V, Woodward M, De Silva DA, Nguyen TN, Maloy VT, Allende MI, Opore-Addo PA, Fassbender K, Bachhuber M, Sandset EC, Walter S; SESAME Study Group. **Sex Differences in Prehospital Stroke Medicine (SESAME): A Systematic Review and Meta-Analysis.** *Stroke.* 2025 Aug 4. doi: 10.1161/STROKEAHA.124.050414. Epub ahead of print. PMID: 40755301.



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6: Zeleke S, Drury P, Allida SM, Ferguson C. **Multicultural Recommendations to Guide Stroke Care: A Document Review of International Stroke Guidelines.** Stroke. 2025 Aug;56(8):2375-2379. doi: 10.1161/STROKEAHA.125.052000. Epub 2025 Jul 28. PMID: 40720568.

7: Unadkat A, Stoller E, Pine H, Eisner ZJ, Klapow MC, Kulkarni AJ, Thiagarajan A, Smith N, Delaney PG. **Prehospital Extremity Fracture Management in Low and Middle-Income Countries: A Scoping Review of Lay First Responders and Traditional Bonesetters.** World J Surg. 2025 Aug;49(8):2255-2263. doi: 10.1002/wjs.12678. Epub 2025 Jul 11. PMID: 40646650; PMCID: PMC12338382.

8: Castro-Delgado R, Mukta NAH, Viñuales EM, Parvin R, Hasan MK, Uddin H. **Emergency Medical Services response to wildfires from a public health perspective: A systematic review.** Burns. 2025 Aug;51(6):107521. doi: 10.1016/j.burns.2025.107521. Epub 2025 Apr 27. PMID: 40460492.

9: Holland J, Watkins-Webb R. **Exploring the concept of a 'long lie' after a fall to inform clinical pathways in pre-hospital services: a systematic literature review.** Nurs Older People. 2025 Aug 4;37(4):20-26. doi: 10.7748/nop.2025.e1505. Epub 2025 May 29. PMID: 40437966.

10: Shah FI, Lew G, Chawdhry Z, Reich K, Crowder K, Lorenzetti DL, McGillivray M, Goodarzi Z. **Agitation management strategies for older adults in the emergency department or with emergency medical services: A scoping review.** Am J Emerg Med. 2025 Aug;94:81-95. doi: 10.1016/j.ajem.2025.04.019. Epub 2025 Apr 16. PMID: 40286527.



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PREHOSPITAL CARE

– clinical trials & RCT & multicenter study –

1. Eur J Pediatr. 2025 Aug 29;184(9):582. doi: 10.1007/s00431-025-06425-w.

Pediatric emergency backpacks-effects of using xABCDE- and Broselow-systems on pediatric emergency care.

Brune B(1)(2), Lemm D(3), Wolf M(4), Johland A(5), Becker L(4), Szalai C(3), Bruns N(6)(7), Brenner T(3), Dudda M(4)(8)(9), Herbstreit F(8)(3).

BACKGROUND: Pediatric emergencies are a challenge for emergency medical service (EMS) personnel regarding medical expertise and equipment. To address the special requirements in terms of size and weight, attempts are being made to systematically structure pediatric emergency backpacks.

OBJECTIVES: The aim of the study was to compare two pediatric emergency backpacks. One structured according to the xABCDE-system, the other to the Broselow-system based on patients' measurements.

METHODS: In total, 115 participants underwent exercises and emergency scenario simulations with two pediatric emergency backpack systems in a prospective, randomized study. First, they performed a material search of six items to test the intuitiveness of both backpack systems. Later, they used the backpacks in the simulation of a pediatric resuscitation and carried out self-assessment and backpack system evaluation.

RESULTS: The handling of the Broselow-system was easier for the participants. Particularly size-specific materials (laryngeal mask (xABCDE vs. Broselow: 61.2 ± 31.3 vs. 24.5 ± 14.2 s, $p < 0.001$)), but also other materials (Magillpliers (37.2 ± 23.3 vs. 7.9 ± 6.1 s, $p < 0.001$), peripheral venous catheter (12.7 ± 5.7 vs. 6.6 ± 2.7 s, $p < 0.001$), pupil lamp (both 17.9 ± 6.9 vs. 16.0 ± 6.9 s, $p < 0.05$)) were found faster. The participants were faster in the resuscitation simulation and selection of large-scale measures using the Broselow-system (e.g. laryngeal mask (187.6 ± 72.6 vs. 155.1 ± 63.5 s, $p = 0.001$) and preparation of the medication administration in the appropriate dosage (243.0 ± 73.9 vs. 219.8 ± 60.2 s, $p < 0.05$)) and rated the Broselow-system as well as their own performance better in all evaluation categories ($p < 0.001$).

CONCLUSIONS: As the Broselow-system coded according to size and weight was ranked better in practical application and evaluation, the size and weight-based sorting should be preferred to pure xABCDE systems. The comparison of the different backpack systems should further be tested in more complex simulations and real operations. What is known? •In emergency



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medicine, patient care follows the structured xABCDE approach to prioritize life-saving interventions. This algorithm is established in both prehospital and in-hospital settings. What is new? • We present the first comparison of two pediatric emergency backpacks structured by the xABCDE algorithm. Both systems were tested in 2 exercises (material search & resuscitation simulation) in randomized order. Participants completed questionnaires on the backpacks and their own performance.

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PMCID: PMC12397160

PMID: 40879680 [Indexed for MEDLINE]

2. BMC Health Serv Res. 2025 Aug 26;25(1):1132. doi: 10.1186/s12913-025-13254-y.

Presenteeism and its relationship with resilience among pre-hospital emergency technicians: a multicenter cross-sectional study.

Aghabarary M(1), Nemat SZ(2), Nayeri ND(3).

BACKGROUND: Presenteeism is when individuals despite experiencing illness or discomfort that necessitates rest and absence from work, still attend their jobs. This type of presence poses challenges for both the individual and the organization. Among the strategies for adapting to and coping with workplace challenges is resilience. The present study aims to determine presenteeism and its relationship with resilience among pre-hospital emergency technicians for the first time in Iran.

METHODS: This cross-sectional, descriptive, correlational, multicenter study was conducted between June and August 2024. The study population comprised all pre-hospital emergency technicians employed at 295 urban, road, and aerial pre-hospital emergency bases across 9 regions and 16 counties in Tehran Province, the capital of Iran. A total of 2,450 technicians were working at these bases. A proportional stratified random sampling method was used based on the number of bases and technicians in each region. Data were collected using the electronic version of the Stanford Presenteeism Scale, Emergency Medical Services Resilience Scale, and a demographic characteristics section. Data analysis was conducted using descriptive and inferential statistics with SPSS software version 28, at a significance level of $P \leq 0.05$.

RESULTS: Out of 500 pre-hospital emergency technicians who received the questionnaire link, 432 completed the survey. The participants' mean presenteeism score was 18.69 ± 4.98 , indicating a moderate level. Their mean resilience score was 124.42 ± 14.02 , reflecting a high



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level of resilience. A statistically significant positive correlation was observed between presenteeism and the dimensions of resilience. The strongest correlation was found between presenteeism and the dimension of job motivation ($r = 0.435$, $p < 0.001$). The roles of presenteeism, shift scheduling based on technician preference, and mandatory overtime were confirmed as predictors of resilience.

CONCLUSION: Most of the study participants exhibited a moderate level of presenteeism and a high level of resilience. Personnel with higher levels of resilience are likely to have greater capacity and ability to perform their duties despite experiencing illness. So, efforts should focus on enhancing staff resilience and providing organizational support during periods of illness.

DOI: 10.1186/s12913-025-13254-y

PMCID: PMC12382295

PMID: 40859271 [Indexed for MEDLINE]

3. BMC Med Educ. 2025 Aug 20;25(1):1180. doi: 10.1186/s12909-025-07730-6.

Investigating the impact of crisis management training on clinical decision-making and management of stress factors in the personnel of emergency medical services: randomized controlled trial.

Babamiri G(1), Karimiankakolaki Z(2).

INTRODUCTION: Emergency medical workers face unique problems that are specific to their work environment because they play an effective role in happy and sad moments of life and death, accidents and disasters, and these people face a high level of tension. The purpose of this study is to investigate the impact of crisis management training on clinical decision-making and management of stress factors in the personnel of emergency medical services (EMS).

METHODS: In this randomized controlled trial with parallel groups study, 64 personnel of the emergency medical center of Shahrekord University of Medical Sciences were selected in two groups of 32 people, control and intervention in 2024. The training content included how to deal with the crisis and crisis management. 32 training sessions were held in two weeks. After the necessary training, the effectiveness of the training on the personnel in line with crisis management was checked through a questionnaire and its relationship with process improvement. Clinical decision-making was investigated. Demographic characteristics, nursing stressors of Gary Taft and Anderson and clinical decision-making questionnaire were used. The data was analyzed with spss23 software.



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RESULTS: The average age of the study subjects in the intervention and control groups was 31.86 and 30.98 years. Before the intervention, there was no significant difference in the average of clinical decision making in the two groups ($p > 0.05$), but after the intervention, there was a statistically significant difference ($p < 0.05$). Also, in the intervention group, there was a significant difference in the decision-making score before and after the intervention ($p < 0.05$). In the two groups' intervention and control, the most common type of decision-making was analytical-intuitive decision-making (71.88 and 65.62%).

CONCLUSION: The results of the present study showed that crisis management training interventions can reduce job stress and tension in prehospital emergency personnel and improve their decision-making process.

DOI: 10.1186/s12909-025-07730-6

PMCID: PMC12366106

PMID: 40836232 [Indexed for MEDLINE]

4. BMC Pediatr. 2025 Aug 8;25(1):614. doi: 10.1186/s12887-025-05975-0.

First-aid practices and pre-hospital care in paediatric snakebites.

Dayasiri K(1), Suraweera N(2), Burhan P(3).

BACKGROUND: Snakebites pose a serious health risk to children in Sri Lanka, particularly in rural areas. Inappropriate first-aid measures and delayed hospital access contribute to adverse outcomes. This study examined caregiver first-aid practices and factors linked to harmful responses.

METHODS: A descriptive cross-sectional mixed-methods study was conducted across four tertiary hospitals in Sri Lanka. Quantitative data were collected from 364 pediatric snakebite cases through structured caregiver interviews. First-aid practices were categorized as safe or potentially harmful. Logistic regression identified predictors of harmful practices. Additionally, 54 qualitative interviews explored caregiver beliefs and behaviours.

RESULTS: While 264 (73.4%) caregivers washed the wound with soap and water and 222 (61.1%) reassured the child. Harmful practices were frequently observed: 97 (26.7%) applied tourniquets, 27 (7.4%) used herbal or home remedies such as lime or mashed onions, 9 (2.5%) attempted to suck out venom, 5 (1.5%) performed religious rituals before hospital care, 2 (0.5%) made incisions to drain blood, and 1 (0.2%) applied Condy's crystals. Harmful practices were significantly associated with low maternal education (AOR 1.94; $p < 0.001$), low paternal



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education (AOR 2.26; $p < 0.001$), low socioeconomic status (AOR 3.67; $p < 0.001$), and cultural beliefs regarding traditional cures (AOR 2.64; $p < 0.001$). Remote healthcare access was a borderline significant factor (AOR 1.28; $p = 0.05$). Prior training in snakebite first aid was protective (AOR 0.21; $p < 0.001$). Qualitative findings revealed coexistence of traditional and biomedical practices and frequent transport-related delays.

CONCLUSION: Despite moderate awareness of recommended first aid, harmful practices persist in paediatric snakebite care in Sri Lanka. Targeted, culturally sensitive education and improved rural emergency transport services are essential to reduce delays and prevent complications.

DOI: 10.1186/s12887-025-05975-0

PMCID: PMC12333078

PMID: 40781301 [Indexed for MEDLINE]

5. Medicine (Baltimore). 2025 Aug 1;104(31):e43651. doi: 10.1097/MD.00000000000043651.

The effects of video-based and blended learning on medication dosage calculation skills of paramedic students: A randomized, quasi-experimental study.

Baran L(1), Öztürk H(2).

BACKGROUND: Medication dosage calculation (MDC) is a vital component of clinical competence for healthcare providers, particularly in emergency medical services, where miscalculations can lead to life-threatening outcomes. This study aimed to compare and evaluate the effects of video-based learning (VBL) and blended learning (BL) on the MDC skills of paramedic students, with the hypothesis that BL would result in higher posttest MDC performance compared to VBL.

METHODS: A randomized quasi-experimental design was used. A total of 151 paramedic students were randomly assigned to 2 groups. Both groups received a 2-week e-learning course that included video-based content and task-based exercises. Additionally, the BL group received an 8-hour classroom-based training session during the same 2-week period, which was scheduled as a single full-day session on the third day of the first week. Following the intervention, both groups completed a posttest assessing their MDC skills.

RESULTS: The BL group achieved significantly higher posttest scores (82.19 ± 13.74) compared to the VBL group (72.24 ± 21.87), with the difference being statistically significant ($P = .001$).



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CONCLUSION: While both methods were effective in enhancing MDC skills, BL was more effective. E-learning materials require further development to function as a fully independent instructional approach.

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PMCID: PMC12323921

PMID: 40760542 [Indexed for MEDLINE]

6. Heart Lung Circ. 2025 Aug;34(8):838-847. doi: 10.1016/j.hlc.2025.01.007. Epub 2025 Jun 6.

Emergency Medical Service Use for Acute Coronary Syndrome in Culturally and Linguistically Diverse Immigrant Populations.

Olani AB(1), Eastwood K(1), Howell S(1), Bray JE(2).

BACKGROUND: In acute coronary syndrome (ACS), emergency medical service (EMS) use reduces pre-hospital delay and increases the chances of survival. However, evidence regarding EMS use in culturally and linguistically diverse (CALD) patients is conflicting. This study aimed to i) examine whether EMS use in patients with ACS varies between CALD and non-CALD populations and ii) identify characteristics associated with EMS and non-EMS use in CALD patients.

METHOD: This is a retrospective analysis of ACS cases presented to emergency departments of public hospitals in Victoria, Australia between January 2016 and June 2021, as recorded in the Victorian Emergency Minimum Dataset maintained by the Victorian Department of Health. Country of birth, preferred language, and the need for an interpreter defined CALD status. Logistic regression was used to describe the characteristics associated with EMS and non-EMS use.

RESULTS: Of the 51,101 eligible ACS cases, 15,580 (30.5%) were from the CALD group. EMS use was lower in CALD than in non-CALD groups (61.9% vs 65.3%; $p < 0.001$; adjusted odds ratio [aOR] 0.78; 95% confidence Interval [CI] 0.75-0.81). In CALD patients, the odds of EMS use increased with advancing age, living alone (aOR 1.45; 95% CI 1.24-1.70), self-referral (aOR 4.53; 95% CI 3.97-5.17), hospital presentation in the year 2020 (aOR 1.16; 95% CI 1.03-1.31) or 2021 (aOR 1.20; 95% CI 1.30-1.39), and being diagnosed with acute myocardial infarction (aOR 1.36; 95% CI 1.26-1.39). Reduced odds of EMS use were associated with being born in Southeast Asia (aOR 0.71; 95% CI 0.57-0.89), Northeast Asia (aOR 0.57; 95% CI 0.42-0.77), and the Americas (aOR 0.59; 95% CI 0.43-0.80); speaking a South Asian language (aOR 0.65; 95% CI 0.51-0.83); and hospital presentation in summer (aOR 0.90; 95% CI 0.82-0.99).



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CONCLUSIONS: EMS use was lower in patients with ACS with CALD backgrounds. Our findings have identified CALD population subgroups to target with education.

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7. Resuscitation. 2025 Aug;213:110655. doi: 10.1016/j.resuscitation.2025.110655. Epub 2025 May 21.

Comparison of ventilation modes in non-traumatic out-of-hospital cardiac arrest: SYMEVECA phase 2.

Hernández-Tejedor A(1), González Puebla V(2), Corral Torres E(3), Montero Hernández SI(4), Caniego Rodrigo C(5), Vázquez García MI(6), Camacho Leis C(7).

AIM: To compare clinical outcomes associated with different ventilation approaches during cardiac arrest.

METHODS: Pragmatic prospective quasi-experimental study in non-traumatic out-of-hospital cardiac arrest in adults attended by an emergency medical service between April-2021 and September-2024. Patients were classified in three groups according to the ventilation method during CPR: Chest Compression Synchronized Ventilation-CCSV (inspiratory time 205 ms), intermittent positive pressure ventilation-IPPV (tidal volume 7 ml/kg, rate 10-12 bpm) or manual resuscitator bag. Main outcome was survival at hospital discharge or 28 days with good neurological recovery (CPC 1-2). We also measured blood gas values 15 min after tracheal intubation or when spontaneous circulation was achieved.

RESULTS: Of the 773 cardiac arrests recorded, 252 were excluded due to very early recovery (193), airway difficulty (54) or protocol violations (5). Patients were analyzed by groups: CCSV (100), IPPV (145) or resuscitator bag (276). In patients with a venous control sample, pH was 7.01 ± 0.15 in CCSV group, 7.00 ± 0.14 in IPPV and 6.96 ± 0.15 in the bag group ($p = 0.02$). The pCO₂ was 76.9 ± 31.8 , 78.3 ± 25.4 and 84.7 ± 30.1 mmHg, respectively ($p = 0.13$). A spontaneous circulation was achieved in 61% with CCSV, 57.2% with IPPV and 49.3% with bag ($p = 0.08$). Survival with good neurological outcome was 16% in CCSV group, 12.4% in IPPV and 9.4% with bag ($p = 0.19$; $p = 0.07$ between CCSV and bag groups).

CONCLUSION: Successful resuscitation may vary according to ventilation mode - the use of a mechanical ventilation and different modes such as CCSV requires further study.

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8. *Pediatr Emerg Care*. 2025 Aug 1;41(8):606-611. doi: 10.1097/PEC.0000000000003389. Epub 2025 May 22.

Racial and Ethnic Differences in ED Analgesia Among Injured Children Transported Via EMS.

Kerolle S(1), Browne LR(2), Brazauskas R(3), Adelgais KM(4), Chadha K(5), Chang TP(6), Harris MI(7), Lerner EB(5), Leonard JC(8), Lowe GS(9), Magill CF(10), Nishijima DK(11), Shah MI(12), Schwartz HP(13), Chumpitazi CE(14); Pediatric Emergency Care Applied Research Network (PECARN) Emergency Medical Services Affiliate Consortium.

OBJECTIVES: Pain management remains suboptimal across the prehospital and the emergency department (ED) settings. Racial and ethnic disparities in the timing of analgesia among children transported to EDs via emergency medical services (EMS) are not known. We investigated disparities in the timing of ED pain management for injured children transported by EMS.

METHODS: We conducted a secondary analysis of a multicenter prospective observational study of children transported via EMS to 10 pediatric EDs. We analyzed the timing of ED analgesia for injured children by race and ethnicity: non-Hispanic White (NH-White), non-Hispanic Black (NH-Black), Hispanic, and Other or Multiracial. We stratified doses of ED analgesia by opioids, nonopioids, nonsteroidal anti-inflammatory drugs, and other analgesic medications regardless of routes of administration.

RESULTS: Among 480 eligible injured children, 353 (73.5%) received ED analgesia and 150 (31.3%) received opioid analgesia in the ED after EMS transport. The median time to first administration of any ED analgesia was 39 minutes (range, 2 min to 6 h). Hispanic children received their first dose of any ED analgesia 55 minutes (minimum-maximum, 2 to 369) into their ED care, compared with 38 minutes (4 to 379) for NH-Black, 37 minutes (4 to 345) for NH-White, and 32 minutes (9 to 188) for children of Other or Multiracial groups ($P = 0.0148$). There were no statistical differences in the time to first ED opioid analgesia by race and ethnicity ($P = 0.3270$). Patients with long bone fractures (hazard ratio: 1.56, 1.18-2.06) and those who had received EMS opioids (1.43, 1.07-1.91) were more likely to receive both any analgesia and opioid analgesia in the ED.

CONCLUSIONS: Among injured children across the country transported by EMS to pediatric EDs, there were race and ethnicity differences with respect to time to any ED analgesia; however, no delay for ED opioids. Further research is needed to understand and mitigate potential root causes of these disparities.

DOI: 10.1097/PEC.0000000000003389



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9. J Hazard Mater. 2025 Aug 5;493:138341. doi: 10.1016/j.jhazmat.2025.138341. Epub 2025 Apr 22.

Association between nitrogen dioxide exposure and out-of-hospital cardiac arrest onset in China: A multicenter, time-stratified, case-crossover study.

Pan C(1), Li X(2), Zhang X(1), Zheng J(1), Song R(1), Zhang Z(1), Chen R(2), Kan H(2), Xu F(3), Chen Y(4), Meng X(5).

Studies on the association between nitrogen dioxide (NO₂) exposure and out-of-hospital cardiac arrest (OHCA) are limited and present inconsistent results. In the context of global urbanization, a large population is exposed to high ambient NO₂ pollution, highlighting the need for further clarification of NO₂-related health hazards. Furthermore, previous studies mostly applied exposure data from monitoring stations, with relatively few investigations examining acute effects using high-resolution modeled data. To explore the association between NO₂ and cardiac OHCA onset risk, a time-stratified case-crossover study was conducted using data from emergency medical service (EMS) systems across 23 Chinese provinces throughout 2020. Conditional logistic regression models were used to investigate the potential association between NO₂ and OHCA onset. Individual-level NO₂ data from both models and monitoring stations were analyzed separately to evaluate their comparability in practice. The analysis incorporated 76,263 EMS-attended cardiac OHCA onsets. The health estimates from NO₂ predictions and measurements were comparable without statistically significant differences, with each 10 µg/m³ increase associated with a 1.16% (95% confidence interval [CI]: 0.38-1.94%) and 1.03% (95% CI: 0.37-1.69%) increase in the risk of OHCA onset, respectively. This nationwide multicenter study demonstrated adverse effects of NO₂ exposure on OHCA onset in a large population residing in regions with higher and variable NO₂ levels. These findings contribute robust epidemiological evidence to this field and offer new evidence to support global policymaking, particularly in developing countries. Additionally, modeled NO₂ predictions with high resolution and coverage can serve as effective alternatives to traditional monitoring station data in epidemiological studies.

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10. Am J Emerg Med. 2025 Aug;94:103-109. doi: 10.1016/j.ajem.2025.04.039. Epub 2025 Apr 21.

Threshold-anxiety in medical students performing a prehospital high-fidelity clinical simulation: Randomized clinical trial.

Martín-Sánchez R(1), Castro Villamor MÁ(2), Rabanales-Soto J(3), Otero de la Torre S(4), Martínez Fernández FT(4), Sánchez Soberón I(4), Sanz-García A(5), Martín-Rodríguez F(6).

BACKGROUND: The aim of this study was to determine the delta anxiety index (pre- and post-simulation) of medical students performing prehospital critical care high-fidelity clinical simulations (sepsis, myocardial infarction, polytrauma and anaphylactic shock) case-by-case. The secondary outcome was to identify clinical scenarios resulting in extreme anxiety levels (> 25 % post-simulation vs. pre-simulation delta anxiety).

METHODS: A randomized (four prehospital critical care cases), blind, simulation-based clinical trial was performed at the Advanced Clinical Simulation Center of the Medical School of Valladolid University (Spain) with the participation of volunteer last-year medical students (6th year) from September 20, 2022, to April 15, 2024. The STAI questionnaire, epidemiological data and lifestyle habits were assessed. The principal outcome was the delta anxiety level (pre- and post-simulation) on the state subscale of the STAI.

RESULTS: A total of 342 participants met the inclusion criteria. The median age was 23 years (IQR: 23-24; range: 22-41), and 67.8 % were female (213 cases). Scenario-by-scenario analysis revealed no significant differences by sex, age, prior simulation training, or role in the simulated scenario (leader or assistant). The polytrauma scenario yielded the worst post-simulation evaluation on the state subscale of the STAI, with a median of 54 points (IQR: 46-66) ($p < 0.001$).

CONCLUSION: Polytrauma and anaphylactic shock scenarios are more likely to induce extreme anxiety levels in final-year medical students during high-fidelity clinical simulations. Educators must be aware of these potential anxiety levels and carefully design the scenarios, providing adequate preparation and facilitating effective debriefing to optimize learning and mitigate the negative effects of excessive anxiety.

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PMID: 40286524 [Indexed for MEDLINE]



Journal report – srpen 2025

PREHOSPITAL CARE

– systematic review & meta-analysis & scoping review –

1. Scand J Trauma Resusc Emerg Med. 2025 Aug 21;33(1):142. doi: 10.1186/s13049-025-01455-7.

Triage of road injury casualties - the role of bystanders: a scoping review.

Russam GS(1), Gluyas-Harris J(2), Aveyard N(3)(4), Nutbeam T(5)(6).

BACKGROUND: Bystanders have the potential to be a critical component of the Road Injury Chain of Survival, particularly in the early phases of injury recognition, scene assessment, and emergency service activation. Their potential role in trauma triage remains underexplored. This scoping review aims to examine the existing evidence of the use of bystanders in triage-both laypersons and non-clinical professionals-during the prehospital phase of road injury and other trauma scenarios.

METHODS: A systematic search was undertaken across MEDLINE, CINAHL, and the Psychology & Behavioural Sciences Collection using the EBSCO Host platform, with supplementary hand searches via Google Scholar and reference screening. Articles were included if they addressed triage by lay or professional bystanders (e.g. police, fire and rescue) in prehospital trauma settings. Data were extracted and synthesised using a descriptive analytical approach.

RESULTS: Twenty-three studies were included. Bystanders demonstrated the ability to apply basic triage tools with moderate accuracy, although over-triage was common and under-triage rates often exceeded accepted thresholds. Several trauma training programmes in low-resource settings included triage components, leading to improvements in knowledge and confidence. Long-term retention and real-world clinical utility remain uncertain. Only one study directly evaluated bystander assessment of crash parameters; lay performance approached that of health professionals in some domains. Technological innovations such as video live-streaming from bystanders to emergency call handlers showed potential to enhance triage and situational awareness, though operational and ethical barriers remain.

CONCLUSIONS: Bystanders may have an expanded role in the triage and early assessment of trauma casualties, particularly in settings where formal EMS is limited or delayed. Within the Road Injury Chain of Survival, empowering bystanders through structured training and technology-enabled support could strengthen early links in the chain. Future research should focus on validating simplified triage approaches, evaluating training impact, and assessing outcomes related to both patient care and system efficiency.

DOI: 10.1186/s13049-025-01455-7



Journal report – srpen 2025

2. Age Ageing. 2025 Aug 1;54(8):afaf228. doi: 10.1093/ageing/afaf228.

Ambulance responses to older adults who have fallen: a systematic review.

Gunson IM(1)(2), Barley C(2), Rosser A(2), Bullock L(3), Gordon AL(4)(5), Kingstone T(1)(6), Bucknall M(1).

BACKGROUND: Approximately 10% of emergency ambulance calls are for adults, 65 years and older, who have fallen. Structured management of this group could improve outcomes and cost-effectiveness. This review sought to synthesise evidence for ambulance-based care of older adults who had fallen and the associated impact on patient outcomes.

METHODS: Eligibility. Peer-reviewed primary evidence, assessing older adults (aged ≥ 65) who had fallen and received an ambulance response. Information sources. CINAHL (EBSCO), MEDLINE (Ovid), Embase (Ovid), HMIC (Ovid), Web of Science and AMBER were searched on 20 February 2025 with no date limit. Quality appraisal. Joanna Briggs Institute's critical appraisal tools. Synthesis. PRISMA reporting, with narrative synthesis using Synthesis Without Meta-analysis guidelines.

RESULTS: Three thousand and forty-nine unique studies were identified. Nine studies were included, ranging from low- to high-quality randomised cluster trials and mixed-methods, prospective and retrospective cohort studies. Patients whose care included fall-specific decision-making tools or referral pathways, were less likely to be conveyed to hospital and more likely to access alternative community healthcare. However, poor uptake of participating paramedics limits the impact on practice. Few fall response or referral schemes were reported in the literature; those that exist have improved outcomes for patients. Where national practice guidelines exist, these were generally adhered to. Patient social characteristics, such as living alone, were the main reason for guideline deviation.

DISCUSSION: Where fall pathways were implemented, outcomes improved, though implementation is contextual. Ambulance staff adhere to guidelines, but whether the guidelines reflect current presentations and treatment opportunities is unclear. Further research is required to establish generalisable approaches.

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PMID: 40819292 [Indexed for MEDLINE]



Journal report – srpen 2025

3. Scand J Trauma Resusc Emerg Med. 2025 Aug 14;33(1):140. doi: 10.1186/s13049-025-01450-y.

Prehospital critical care dispatch: a scoping review (PHASE).

Owen P(1)(2)(3), Kirby K(4)(5), Hannah J(6), Crouch R(4)(6)(5)(7), Hyde P(6)(5), Voss S(4).

INTRODUCTION: Prehospital critical care (PHCC) dispatch is a vital component of emergency medical services, aiming to allocate specialised resources for critically ill or injured patients in out-of-hospital settings. This scoping review examines the existing evidence on optimising PHCC dispatch, identifies research gaps, and highlights priorities for future investigation.

METHODS: A systematic search of databases including CINAHL, PubMed, EMBASE, and CENTRAL from January 2004 to October 2024. We included all study types, focusing on the dispatch of PHCC assets globally.

RESULTS: The search yielded 39 studies that met the inclusion criteria. The included studies varied in design, setting and focus (e.g. Traumatic vs. Medical aetiology). Outcomes measured ranged across dispatch factors, physiological and temporal variables, with advanced intervention and survival metrics commonly used to assess dispatch effectiveness.

DISCUSSION: The review found variability in dispatch models, staffing, and outcome measures. Most studies focused on HEMS and P-HEMS, often using injury mechanisms and physiological parameters as dispatch criteria. However, their predictive accuracy is inconsistent, especially for older trauma patients. Clinician involvement improves accuracy, but the role of cognitive tools needs more study. Challenges include ethical and logistical issues in prospective studies, limited research in low- and middle-income countries, and lack of harmonised datasets for missed dispatch opportunities. Technologies like automated crash notifications and real-time video show promise but need more development validation.

CONCLUSION: This review underscores the need for robust, prospective research to refine dispatch criteria and integrate advanced technologies. Addressing these gaps could improve resource allocation, reduce over- and under-triage, and ultimately enhance patient outcomes in PHCC systems.

DOI: 10.1186/s13049-025-01450-y

PMCID: PMC12351921

PMID: 40814122 [Indexed for MEDLINE]



Journal report – srpen 2025

4. Cochrane Database Syst Rev. 2025 Aug 12;8:CD015538. doi: 10.1002/14651858.CD015538.pub2.

First aid training for laypeople.

Kendall I(1)(2), Laermans J(1)(2)(3), D'aes T(1)(2)(3), Borra V(4), McCaul M(5), Aertgeerts B(6)(7), De Buck E(1)(2)(3).

RATIONALE: The global burden of death and disability is significantly influenced by illness and injury, which can occur at any time and anywhere. When these conditions are acute or life-threatening, immediate care outside the hospital becomes crucial. In these situations, first aid provided by laypeople (i.e. individuals without formal healthcare education) is a vital component of the prehospital care system, playing an important role in preserving life, alleviating suffering, preventing further harm, and promoting recovery. Therefore, training laypeople in first aid is widely assumed to increase first aid-related competencies and, hence, may improve the health outcomes of suddenly ill or injured individuals.

OBJECTIVES: The main objective is to assess the effects of first aid training for laypeople compared with another type of training or no training on the health outcomes of people receiving first aid, the quality of the first aid provided, and the helping behaviour of people providing first aid. Secondary objectives are to assess the effects of first aid training for laypeople compared with another type of training or no training on first aid-related educational outcomes, including knowledge, skills, self-efficacy, and willingness to help, and adverse effects.

SEARCH METHODS: We searched CENTRAL, MEDLINE, Embase, four other databases and two trials registries, together with reference and citation checking. We handsearched the websites of organisations, journals, and conference proceedings. The latest search date was 16 December 2024.

ELIGIBILITY CRITERIA: We included randomised controlled trials (RCTs) and cluster-RCTs in laypeople comparing physical health first aid training with no first aid training (i.e. another type of training or no training).

OUTCOMES: Our critical outcomes are the health outcomes of people receiving first aid, the quality of the first aid provided, and the helping behaviour of people providing first aid. Our important outcomes are first aid-related knowledge, first aid-related skills, self-reported first aid-related self-efficacy, and self-reported first aid-related willingness to help.

RISK OF BIAS: We used the Cochrane Risk of Bias 2 tool (RoB 2) to assess bias in RCTs and its extension in cluster-RCTs.



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SYNTHESIS METHODS: When possible, we synthesised results for each outcome using meta-analysis of risk ratios (RR) and ratio of means (RoM) with 95% confidence intervals (CI) for dichotomous and continuous outcomes, respectively. When meta-analysis was not feasible due to the nature of the data, we followed the synthesis without meta-analysis (SWiM) principles and summarised results using vote counting based on the direction of effect. We applied GRADE to assess the certainty of the evidence for each outcome.

INCLUDED STUDIES: We included 36 RCTs (21 individual and 15 cluster-RCTs) with a total of 15,657 participants. Thirty-four studies (94%) were conducted in high- or upper-middle-income countries, and only two in low- or lower-middle-income countries. Seventeen studies evaluated adult populations (≥ 18 years; 4542 participants), whereas 19 studies included child or adolescent populations (< 18 years; 11,115 participants). First aid training components, such as content, didactic approach, mode of delivery, duration, frequency, and instructor, varied substantially across studies. Similarly, studies measured outcomes using different tools and scales at various time points.

SYNTHESIS OF RESULTS: Critical outcomes None of the included studies reported on the health outcomes of people receiving first aid or the quality of first aid provided. The evidence is very uncertain about the effect of first aid training on helping behaviour (1 study, 3070 participants; very low-certainty evidence), due to very serious risk of bias and serious imprecision. Important outcomes First aid training compared to no first aid training probably increases acquisition of first aid-related knowledge (RoM 1.58, 95% CI 1.37 to 1.82; $I^2 = 93\%$; 8 studies, 3515 participants; moderate-certainty evidence), skills (RR 2.53, 95% CI 1.81 to 3.55; $I^2 = 92\%$; 12 studies, 3063 participants; moderate-certainty evidence), and self-efficacy (RR 1.91, 95% CI 1.23 to 2.97; $I^2 = 50\%$; 2 studies, 285 participants; moderate-certainty evidence), measured within one month after the end of the training (i.e. in the short term). The evidence is very uncertain about the effect of first aid training on willingness to help in the short term (RoM 1.02, 95% CI 0.97 to 1.07; $I^2 = 85\%$; 2 studies, 1083 participants; very low-certainty evidence). We judged the overall risk of bias for the 36 included studies to be either high or of some concern, except for one study, which was at low risk of bias. Lack of blinding of the outcome assessors and a large amount of missing outcome data were the most common methodological issues. The serious or very serious risk of bias was the primary reason for downgrading the certainty of the evidence in this review.

AUTHORS' CONCLUSIONS: Our review found no studies that compared the effects of first aid training to no first aid training on the health outcomes of people receiving first aid or the quality of first aid provided. There were insufficient data to draw conclusions about the impact on helping behaviour. Nevertheless, in the short term, first aid training probably increases the



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acquisition of knowledge, skills, and self-efficacy. But the evidence regarding its effect on willingness to help in the short term remains very uncertain.

FUNDING: This Cochrane review had no dedicated funding but was supported by internal sources from the Foundation for Scientific Research of the Belgian Red Cross-Flanders.

REGISTRATION: Protocol available via doi.org/10.1002/14651858.CD015538.

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5. Stroke. 2025 Aug 4. doi: 10.1161/STROKEAHA.124.050414. Online ahead of print.

Sex Differences in Prehospital Stroke Medicine (SESAME): A Systematic Review and Meta-Analysis.

Wells B(1)(2), Nasreldein A(3), Larsen K(4)(5), van Wijck F(1), Carcel C(6), Christensen H(7), Hov MR(4)(5)(8), Caso V(9), Woodward M(6)(10), De Silva DA(11), Nguyen TN(12), Maloy VT(4), Allende MI(6), Opare-Addo PA(13), Fassbender K(14), Bachhuber M(14), Sandset EC(4)(5), Walter S(14); SESAME Study Group.

Collaborators: Avici A, Arsava M, Arsovska A, Eren F, Gulsen K, Hubert G, Martins S, Matuja S, Nguyen TQ, Ozturk S, Samapaio Silva G, Stephen Sarfo F.

BACKGROUND: Several studies have evaluated sex discrepancies in the prehospital management of patients with acute stroke. This systematic review and meta-analysis aims to summarize reported knowledge about sex differences in dispatch center and emergency medical service management. It proposes a roadmap of questions and the next necessary steps to ensure equitable prehospital stroke care.

METHODS: We conducted a systematic review and meta-analysis, using a random-effects model with inverse weighting. PubMed, CINAHL, EMBASE, and EMCARE were searched for studies investigating sex differences in the prehospital management of patients with suspected and acute stroke. The main outcome was the relative risk (RR) for receiving a correct prehospital stroke diagnosis. Additional outcomes are related to prehospital management and time metrics.

RESULTS: Sixteen studies were included, comprising 571 024 males and 622 764 females. No relevant risk of bias was detected. Female patients were less often correctly identified as stroke suspects than male patients (RR, 0.92 [95% CI, 0.89-0.96]; I²=73%). No differences were observed in the number receiving a dispatch code stroke (RR, 0.95 [95% CI, 0.88-1.02];



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I²=96%), prenotification to hospital by emergency medical service (RR, 0.98 [95% CI, 0.96-1.00]; I²=92%), or conveyance to a stroke center (RR, 0.99 [95% CI, 0.79-1.24]; I²=82%). There was no difference in mean time from emergency call to hospital door (mean difference, 1.12 [95% CI, -0.64 to 2.89] minutes; I²=96%). No conclusion could be drawn for outcomes of on-site clinical management, emergency medical service-to-hospital team interaction, and most of the time metrics due to a lack of data.

CONCLUSIONS: This analysis indicates sex differences in the prehospital recognition of acute stroke. However, significant heterogeneity and a lack of data for most steps of prehospital care also highlight the urgent need for high-quality studies to systematically investigate prehospital management disparity between female and male patients with suspected acute stroke.

REGISTRATION: URL: <https://crd.york.ac.uk/PROSPERO/>; Unique identifier: CRD42023442997.

DOI: 10.1161/STROKEAHA.124.050414

PMID: 40755301

6. Stroke. 2025 Aug;56(8):2375-2379. doi: 10.1161/STROKEAHA.125.052000. Epub 2025 Jul 28.

Multicultural Recommendations to Guide Stroke Care: A Document Review of International Stroke Guidelines.

Zelege S(1)(2)(3), Drury P(1), Allida SM(1)(2), Ferguson C(1)(2).

Stroke disproportionately affects individuals from culturally and linguistically diverse backgrounds, often leading to poorer outcomes. Although stroke guidelines are essential for ensuring evidence-based care, the extent to which they incorporate cultural considerations remains unclear. This document review aims to systematically review international stroke guidelines for the inclusion of culture-related recommendations that support equitable stroke care. We conducted a document review of English-language international stroke guidelines published between June 2019 and May 2024, using a structured search strategy. Paired reviewers independently screened and extracted cultural recommendations, with a third reviewer resolving discrepancies. Guideline quality was appraised using the Appraisal of Guidelines for Research and Evaluation II instrument. Among 24 included guidelines, only 3 (12%) contained culture-related recommendations. Of 2991 total recommendations, 6 (0.2%) addressed cultural considerations, spanning prehospital care, acute care, rehabilitation, and palliative care. Most were supported by low-to-moderate quality evidence. The majority (88%) of international stroke guidelines lack cultural recommendations. Incorporating cultural



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considerations is critical for promoting culturally safe and equitable stroke care. Future research should explore barriers and facilitators to integrating cultural recommendations into stroke guidelines.

DOI: 10.1161/STROKEAHA.125.052000

7. World J Surg. 2025 Aug;49(8):2255-2263. doi: 10.1002/wjs.12678. Epub 2025 Jul 11.

Prehospital Extremity Fracture Management in Low and Middle-Income Countries: A Scoping Review of Lay First Responders and Traditional Bonesetters.

Unadkat A(1)(2), Stoller E(2)(3), Pine H(2)(4), Eisner ZJ(2)(5), Klapow MC(2)(6), Kulkarni AJ(2)(7), Thiagarajan A(2)(8), Smith N(2)(9), Delaney PG(2)(10).

PURPOSE: Low- and middle-income countries (LMICs) experience the highest rates of injury-related deaths globally, exacerbated by a lack of robust emergency medical services (EMS). Though fractures contribute substantially to global injury, little is known about prehospital management of extremity fractures in LMICs.

METHODS: This review included literature published between January 2000 and January 2024. Inclusion criteria pertained to prehospital settings, defined as care rendered prior to hospital presentation, including care provided by lay first responders (LFRs), professional EMS personnel, and traditional bonesetters (TBS). Multiple authors used the Newcastle-Ottawa scale to assess texts meeting inclusion criteria, extracting relevant details for analysis.

RESULTS: Of 1251 articles identified, 25 met inclusion criteria. Studies spanned 9 countries across 4 continents, with 14 articles studying care by TBS, 9 by LFRs, and 2 by other prehospital providers. LFR training courses report a combined weighted average pre-/post-course difference of 29.16 percentage points. A total of 67% of included studies report adverse outcomes associated with TBS-managed fractures in the prehospital setting. TBS care is often sought prior to hospital presentation due to sociocultural beliefs, accessibility, and cheaper costs. Few training courses for TBS have been performed, though one course reports a 20.4% increase in fracture management knowledge.

CONCLUSION: In certain resource-limited settings, TBS provide most initial fracture management, which may adversely impact outcomes. Knowledge transfer has been demonstrated during prehospital fracture management courses for LFRs and TBS. Early evidence suggests TBS training and integration into healthcare systems may reduce complication rates, improving long-term outcomes.

DOI: 10.1002/wjs.12678



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8. Burns. 2025 Aug;51(6):107521. doi: 10.1016/j.burns.2025.107521. Epub 2025 Apr 27.

Emergency Medical Services response to wildfires from a public health perspective: A systematic review.

Castro-Delgado R(1), Mukta NAH(2), Viñuales EM(3), Parvin R(4), Hasan MK(5), Uddin H(6).

As the incidence and intensity of wildfire events continue to increase globally, it is crucial to understand how Emergency Medical Services (EMS) respond to such extreme situations. Hence, this study aimed to synthesize existing evidence on EMS responses during wildfire episodes. A systematic search of five electronic databases (PubMed, Web of Science, Medline Ovid, Embase, and Scopus) was conducted using predefined search terms, with no time or geographical restrictions. This review included peer-reviewed full-text English-language articles that explored the EMS responses during wildfires. After removing duplicate records, the titles, abstracts, and full texts were screened using the eligibility criteria, and data were extracted independently using a data extraction template by two reviewers. Five databases recorded a total of 1339 articles. After removing the duplicates, 723 articles were screened by their title and abstract, and 30 full-text articles were reviewed. Finally, 6 full-text articles were included for data analysis. This review documented that EMS provided counseling support, acute health care services, burn and injury services, services for respiratory and ophthalmology problems, clinical services, and coordination services following wildfire episodes. Additionally, EMS delivers both direct and indirect (using telephone), short- and long-term physical and mental health services, as well as referral health services with clinical and community health services. The study's findings help to understand the current practice of EMS services and identify potential shortcomings. EMS services should be extended to ensure the safeguarding of vulnerable communities from the threat of wildfires as well as the preparedness and resilience of EMS systems should be enhanced to improve patient outcomes and save lives during such episodes.

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PMID: 40460492 [Indexed for MEDLINE]

9. Nurs Older People. 2025 Aug 4;37(4):20-26. doi: 10.7748/nop.2025.e1505. Epub 2025 May 29.

Exploring the concept of a 'long lie' after a fall to inform clinical pathways in pre-hospital services: a systematic literature review.

Holland J(1), Watkins-Webb R(1).



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The term 'long lie' is often used clinically to describe a situation where an individual has had a fall and has remained on the floor. However, there is no universal definition of what constitutes a long lie or recognition of the effect it can have on physical or psychological well-being. In August 2024, the authors undertook a comprehensive literature review on the subject. A search of articles published in English from the past 45 years which refer to adults over the age of 18 years who had a fall and a long lie, identified six articles. The outcome of the review demonstrates that there is a lack of primary literature that clearly defines a long lie. Nevertheless, ambulance and community first responders are encouraged to convey to hospital patients who have been on the floor for one hour or more, directly contradicting national health agendas that promote the delivery of acute care closer to home.

DOI: 10.7748/nop.2025.e1505

PMID: 40437966 [Indexed for MEDLINE]

10. Am J Emerg Med. 2025 Aug;94:81-95. doi: 10.1016/j.ajem.2025.04.019. Epub 2025 Apr 16.

Agitation management strategies for older adults in the emergency department or with emergency medical services: A scoping review.

Shah FI(1), Lew G(2), Chawdhry Z(3), Reich K(2), Crowder K(4), Lorenzetti DL(5), McGillivray M(6), Goodarzi Z(7).

BACKGROUND: Agitation is common in the emergency department (ED) and with emergency medical services (EMS), which can pose significant challenges to safety and patient care. In older adults, agitation is a common symptom of dementia or delirium.

RATIONALE: Managing agitation in older adults is challenging in emergency care environments. A scoping review of literature for agitation management approaches for older adults in ED/EMS environments was completed.

METHODS: We searched Medline, Embase, and APA PsycINFO, combining key words and subject headings for 3 concepts: "older adults, aged 65 and older," "agitation/dementia/delirium," and "ED/EMS." Studies which explored management strategies for older adults with agitation, dementia, or delirium in the ED or EMS were included. Studies with younger populations (<65 years old) and/or lacking patient data specifically from the ED or EMS were excluded.

RESULTS: A total of 7113 studies were screened, of which 22 were included in this review: pharmacological (n = 8), non-pharmacological (n = 5), multi-component (n = 3) treatments, and recommendations (n = 6). Most were in the ED, and 5038 older adults were included



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across all studies. Antipsychotics and benzodiazepines to manage agitation were common. Non-pharmacological and multi-component interventions were less commonly evaluated and lacked exploration of patient outcomes. Recommendations stressed caution with pharmacological medications rather than prioritizing non-restraint strategies.

DISCUSSION: Most studies identified use of pharmacological treatment for agitation amongst older adults in ED/EMS settings, however, are not found to be overly effective and are associated with patient harm. There is a significant gap in evidence specific to EMS settings and evaluation of effectiveness of non-pharmacological interventions, highlighting the need for further research.

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PMID: 40286527 [Indexed for MEDLINE]