Journal report – duben 2025

OBSAH

PREHOSPITAL CARE

– clinical trials & RCT & multicenter study

1: Patterson PD, Martin SE, MacAllister SA, Weaver MD, Patterson CG. **Variations in Sleep, Fatigue, and Difficulty with Concentration Among Emergency Medical Services Clinicians During Shifts of Different Durations.** Int J Environ Res Public Health. 2025 Apr 6;22(4):573. doi: 10.3390/ijerph22040573. PMID: 40283798; PMCID: PMC12026690.

2: Azeli Y, Solà-Muñoz S, Trenado J, Jacob J, Cubedo M, Delgado R, Mugica EM, Fontan I, Bracero A, López-López C, Carricondo-Avivar MDM, Luque-Hernández MJ, Villalba E, Simón S, Castejón ME, Goñi C, Cardenete C, Quintela Z, Abejón R, Bermejo Á, Martín M, Soto-García MÁ, Morales-Alvarez J, Cuartas-Alvarez T, Castro-Delgado R, Jiménez-Fàbrega X. **A transfer triage tool for COVID-19 mass critical care surges.** Sci Rep. 2025 Apr 5;15(1):11726. doi: 10.1038/s41598-025-95337-8. PMID: 40188194; PMCID: PMC11972393.

3: Cudini D, Smith K, Shao J, Bernard S, Okyere D, Nehme Z, Nehme E, Anderson D, Magnuson N, Thursky K, Mori D, Oosthuizen W, Udy A. **Blood culture collection and administration of intravenous ceftriaxone by paramedics in patients with suspected sepsis (the pass trial).** Emerg Med Australas. 2025 Apr;37(2):e70027. doi: 10.1111/1742-6723.70027. PMID: 40098585.

4: Shenoi RP, Crowe JE, Dorfman SR, Bergmann KR, Mistry RD, Hariharan S, Tavarez MM, Wai S, Jones JL, Langhan ML, Ward CE, McCallin TE, Sethuraman U, Shah N, Mendez D, Wolpert KH, Santos-Malave C, Ruttan T, Quayle KS, Okada P, Bubolz B, Buscher JF, McKee R, Mangold K, Wendt WJ, Thompson AD, Hom J, Brayer AF, Blackstone MM, Brennan C, Russell WS, Agarwal M, Khanna K, Louie J, Sheridan D, Camp EA; **Pediatric Emergency Medicine Collaborative Research Committee. Factors Associated with Pediatric Drowning-Associated Lung Injury.** J Pediatr. 2025 Apr;279:114459. doi: 10.1016/j.jpeds.2024.114459. Epub 2024 Dec 28. PMID: 39736377.

5: Ho YJ, Lien CJ, Tsai RJ, Fan CY, Chen CH, Huang CT, Chen CY, Chen YC, Huang CH, Chiang WC, Huang CH, Sung CW, Huang EP. **Association between pre-arrest left ventricular ejection fraction and survival in nontraumatic out-of-hospital cardiac arrest.** Eur J Emerg Med. 2025 Apr 1;32(2):131-140. doi: 10.1097/MEJ.0000000000001181. Epub 2024 Sep 16. PMID: 39283737.

6: Jurado-Palomo J, Sanz-García A, Martín-Conty JL, Polonio-López B, López-Izquierdo R, Sáez-Belloso S, Del Pozo Vegas C, Martín-Rodríguez F. **Prehospital point-of-care medication burden**

as a predictor of poor related outcomes in unselected acute diseases. Intern Emerg Med. 2025 Apr;20(3):887-897. doi: 10.1007/s11739-024-03729-x. Epub 2024 Aug 2. PMID: 39090370.

PREHOSPITAL CARE

– systematic review & meta-analysis

1: Johnston S, Waite P, Laing J, Rashid L, Wilkins A, Hooper C, Hindhaugh E, Wild J. **Why Do Emergency Medical Service Employees (Not) Seek Organizational Help for Mental Health Support?: A Systematic Review.** Int J Environ Res Public Health. 2025 Apr 17;22(4):629. doi: 10.3390/ijerph22040629. PMID: 40283853; PMCID: PMC12027444.

2: Cuthbertson J, Drummond G. **Prehospital Care Post-Road-Crash: A Systematic Review of the Literature.** Prehosp Disaster Med. 2025 Apr;40(2):94-100. doi: 10.1017/S1049023X25000202. Epub 2025 Apr 8. PMID: 40195603; PMCID: PMC12018007.

3: Penn J, McAleer R, Ziegler C, Cheskes S, Nolan B, von Vopelius-Feldt J. **Effectiveness of Prehospital Critical Care Scene Response for Major Trauma: A Systematic Review.** Prehosp Emerg Care. 2025 Apr 1:1-14. doi: 10.1080/10903127.2025.2483978. Epub ahead of print. PMID: 40131291.

4: Bowman TG, Boergers RJ, Caswell SV, Conway D, Mills WJ, Putukian M, Merritt M, Vescovi JD, Strapp E, Loehr K, Monnin J, Vozzo R, Hatch R, Wesley Siler C, Scarneo-Miller SE. **Prehospital care of suspected spine-injured lacrosse athletes: a systematic search, evidence review, and consensus recommendations.** Br J Sports Med. 2025 Apr 24;59(9):630-639. doi: 10.1136/bjsports-2024-108951. PMID: 39922569.

5: Zhang K, Zhong C, Lou Y, Fan Y, Zhen N, Huang T, Chen C, Shan H, Du L, Wang Y, Cui W, Cao L, Tian B, Zhang G. **Video laryngoscopy may improve the intubation outcomes in critically ill patients: a systematic review and meta-analysis of randomised controlled trials.** Emerg Med J. 2025 Apr 22;42(5):334-342. doi: 10.1136/emermed-2023-213860. PMID: 39358006.

Journal report – duben 2025

PREHOSPITAL CARE

– clinical trials & RCT & multicenter study –

1. Int J Environ Res Public Health. 2025 Apr 6;22(4):573. doi: 10.3390/ijerph22040573.

Variations in Sleep, Fatigue, and Difficulty with Concentration Among Emergency Medical Services Clinicians During Shifts of Different Durations.

Patterson PD(1)(2), Martin SE(1), MacAllister SA(1)(3), Weaver MD(4)(5), Patterson CG(6)(7).

We sought to characterize momentary changes in fatigue, sleepiness, and difficulty with concentration during short and long duration shifts worked by emergency medical services (EMS) and fire personnel across the United States. In addition, we tested for differences in pre-shift and on-shift sleep stratified by shift duration. We examined real-time mobile-phone text message queries during scheduled shifts from the EMS Sleep Health Study, a nationwide, cluster-randomized trial (ClinicalTrials.gov Identifier: NCT04218279). Linear mixed effects models were used and Bonferroni p-values reported for multiple comparisons. In total, 388 EMS clinicians from 35 EMS/fire agencies documented 4573 shifts and responded to 64.6% of 161,888 text message queries. Most shifts (85.5%) were 12 or 24 h in duration. Mean sleep hours pre-shift was 6.2 (SD1.9) and mean sleep hours on shift was 3.4 (SD2.9) and varied by shift duration ($p < 0.0001$). The highest level of fatigue, sleepiness, and difficulty with concentration during any shift occurred during 24 h shifts and corresponded to the early morning hours at 03:00 or 04:00 a.m. The real-time assessments of sleep hours and fatigue in this study revealed deficits in sleep health for EMS and fire personnel and critical time points for intervention during shifts when the risk to safety is high.

DOI: 10.3390/ijerph22040573

PMCID: PMC12026690

PMID: 40283798 [Indexed for MEDLINE]

Journal report – duben 2025

2. Sci Rep. 2025 Apr 5;15(1):11726. doi: 10.1038/s41598-025-95337-8.

A transfer triage tool for COVID-19 mass critical care surges.

Azeli Y(#)(1)(2)(3)(4), Solà-Muñoz S(#)(5)(6), Trenado J(5)(7)(8), Jacob J(7)(9), Cubedo M(10), Delgado R(6)(11), Mugica EM(6)(12), Fontan I(6)(12), Bracero A(6)(13), López-López C(6)(14), Carricondo-Avivar MDM(6)(14), Luque-Hernández MJ(6)(14), Villalba E(6)(15), Simón S(6)(16), Castejón ME(6)(17), Goñi C(6)(18), Cardenete C(6)(19), Quintela Z(6)(19), Abejón R(6)(19), Bermejo Á(6)(19), Martín M(6)(19), Soto-García MÁ(5), Morales-Alvarez J(5), Cuartas-Alvarez T(6)(20), Castro-Delgado R(6)(20)(21), Jiménez-Fàbrega X(5)(6)(7).

The objective of this study is to develop and validate a predictive model for mortality among severe COVID-19 patients who are candidates for inter-hospital transfer. A multicenter prospective observational study was conducted between 1 January 2021 and 30 April 2021 (third and fourth pandemic waves) in regional coordination centers of the Emergency Medical Services of eight Spanish autonomous communities. Hospitalized patients with severe COVID-19 transferred to other hospitals were included. Clinical variables from the initial evaluation, the triage score, and in-hospital mortality rates were collected. A Lasso-type regression analysis was performed to fit the mortality predictive model and its performance was evaluated by a leave-one-out cross-validation. Subsequently, the regional mass triage (MATER) score was created. 1,018 transferred patients were included, with a mean age of 62.3 years (SD 12), of whom 65.1% were male and 89.6% were admitted to an Intensive Care Unit. In-hospital mortality was 23.0%. The MATER score included six variables and presented good discrimination ability with an area under the curve of 0.79 (95% CI 0.77-0.81) and a good calibration with a Brier score of 0.135. The MATER score successfully predicted the mortality rate of severe COVID-19 patients and can be helpful in decision-making for triage and transfer prioritization in mass critical care surges.

DOI: 10.1038/s41598-025-95337-8

PMCID: PMC11972393

PMID: 40188194 [Indexed for MEDLINE]

3. Emerg Med Australas. 2025 Apr;37(2):e70027. doi: 10.1111/1742-6723.70027.

Blood culture collection and administration of intravenous ceftriaxone by paramedics in patients with suspected sepsis (the pass trial).

Cudini D(1), Smith K(2)(3)(4), Shao J(2), Bernard S(1)(2)(5), Okyere D(1)(2), Nehme Z(1)(2)(3), Nehme E(1)(2), Anderson D(1)(3)(5), Magnuson N(1), Thursky K(6), Mori D(7), Oosthuizen W(8)(9), Udy A(5)(10).

OBJECTIVE: To evaluate the feasibility of pre-hospital blood culture (BC) collection and intravenous (IV) antibiotic administration in patients with suspected sepsis.

METHODS: In this open-label trial, BCs were collected in all participants, who were then randomised to ongoing care (control) or ongoing care plus 2 g IV ceftriaxone (intervention). Time to antibiotic administration was the primary outcome.

RESULTS: Thirty-five patients were enrolled and randomised (21 control, 14 intervention). BCs were obtained in 89% (n = 31/35) and grew a pathogen in 42% (n = 13/31). Intervention patients received antibiotics a median of 108 (95% CI 34 to 170) minutes earlier (P < 0.01).CONCLUSION: BCs were successfully obtained by paramedics, and pre-hospital IV ceftriaxone resulted in expedited antibiotic administration.

CLINICAL TRIAL REGISTRATION: ACTRN12618000199213.

DOI: 10.1111/1742-6723.70027

PMID: 40098585 [Indexed for MEDLINE]

4. J Pediatr. 2025 Apr;279:114459. doi: 10.1016/j.jpeds.2024.114459. Epub 2024 Dec 28.

Factors Associated with Pediatric Drowning-Associated Lung Injury.

Shenoi RP(1), Crowe JE(2), Dorfman SR(2), Bergmann KR(3), Mistry RD(4), Hariharan S(5), Tavarez MM(6), Wai S(7), Jones JL(8), Langhan ML(9), Ward CE(10), McCallin TE(11), Sethuraman U(12), Shah N(13), Mendez D(14), Wolpert KH(15), Santos-Malave C(16), Ruttan T(17), Quayle KS(18), Okada P(19), Bubolz B(20), Buscher JF(21), McKee R(22), Mangold K(23), Wendt WJ(24), Thompson AD(25), Hom J(26), Brayer AF(27), Blackstone MM(28), Brennan C(29), Russell WS(30), Agarwal M(31), Khanna K(32), Louie J(33), Sheridan D(34), Camp EA(8); Pediatric Emergency Medicine Collaborative Research Committee.

OBJECTIVE: To identify risk factors for clinically-important drowning-associated lung injury (ciDALI) in children.

STUDY DESIGN: This was a cross-sectional study of children (0 through 18 years) who presented to 32 pediatric emergency departments (EDs) from 2010 through 2017. We reviewed demographics, comorbidities, prehospital data, chest radiographs reports, and ED course from emergency medical services, medical, and fatality records. We defined ciDALI as presence of any of the following: (1) drowning deaths without cerebral/cervical spine injuries; (2) supplemental oxygen >8 hours postdrowning; (3) invasive/noninvasive ventilatory support in first 24 hours; or (4) abnormal chest radiographic findings in the first 24 hours without resolution within 8 hours postdrowning. We used mixed-methods logistic regression with site as random effect to identify risk factors and bootstrapping to reduce overfitting.

RESULTS: We enrolled 4213 patients (no ciDALI = 3045 [72%]; ciDALI = 1168 [28%]). The median age was 3 years (IQR: 1, 5). The risk factors for patients with ciDALI were age >5 years old (aOR: 2.4 [95% CI: 2.0-3.0]); submersion >5 minutes (aOR: 6.0 [95% CI: 3.5-10.2]); any scene resuscitation (aOR: 3.3 [95% CI: 2.5-4.5]) and at presentation to the ED abnormal mentation (aOR: 6.4 [95% CI: 4.1-10.0]), abnormal heart rate (aOR: 1.8 [95% CI: 1.6-2.1]), abnormal respiratory rate (aOR: 1.8 [95% CI: 1.4-2.3]), hypotension (aOR: 2.8 [95% CI: 1.0-7.4]), and abnormal lung auscultation (OR: 3.9 [95% CI: 2.9-5.4]).

CONCLUSIONS: Pediatric ciDALI risk factors include older age, scene resuscitation, prolonged submersion, and abnormal pulmonary, hemodynamic, and neurological findings at ED presentation. Prospective research to stratify risks based on submersion-related lung injury is needed to help determine short-term outcome and optimize patient disposition.

DOI: 10.1016/j.jpeds.2024.114459

PMID: 39736377 [Indexed for MEDLINE]

5. Eur J Emerg Med. 2025 Apr 1;32(2):131-140. doi: 10.1097/MEJ.0000000000001181. Epub 2024 Sep 16.

Association between pre-arrest left ventricular ejection fraction and survival in nontraumatic out-of-hospital cardiac arrest.

Ho YJ(1), Lien CJ(2), Tsai RJ(2), Fan CY(2), Chen CH(2), Huang CT(2), Chen CY(3), Chen YC(3), Huang CH(2), Chiang WC(3)(4), Huang CH(1)(4), Sung CW(2)(4), Huang EP(1)(2)(4).

BACKGROUND AND IMPORTANCE: Out-of-hospital cardiac arrest (OHCA) poses major public health issues. Pre-arrest heart function is a prognostic factor, but the specific contribution of pre-arrest echocardiographic evaluation in predicting OHCA outcome remains limited.

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OBJECTIVE: The primary objective was to investigate the association between left ventricular ejection fraction (LVEF) measured in echocardiography prior to OHCA and survival to hospital discharge.

DESIGN, SETTINGS, AND PARTICIPANTS: This multicenter retrospective cohort study analyzed data from the National Taiwan University Hospital and its affiliated hospitals. We included adult nontraumatic OHCA patients who were treated by the emergency medical services (EMS) and underwent echocardiography within 6 months prior to the OHCA event from January 2016 to December 2022. Data included demographics, preexisting diseases, resuscitation events, and echocardiographic reports.

OUTCOMES MEASURE AND ANALYSIS: The primary outcome was the survival to hospital discharge after post-arrest care. Statistical analysis involved multivariable logistic regression to modify potential confounders, reported as adjusted odds ratio (aOR) and 95% confidence interval (CI), and evaluate the association between echocardiographic findings and survival to hospital discharge.

MAIN RESULTS: This study analyzed 950 patients, with 33.6% surviving to discharge. A higher pre-arrest LVEF was independently associated with increased survival. Compared to patients with LVEF < 40%, those with LVEF between 40% and 60% had significantly higher odds of survival (aOR = 3.68, 95% CI = 2.14-6.35, P < 0.001), and those with LVEF > 60% had even greater odds of survival (aOR = 5.46, 95% CI = 3.09-9.66, P < 0.001). There was also an association between lower tricuspid regurgitation pressure gradient and survival (aOR = 0.98, 95% CI = 0.97-1.00, P = 0.015). Younger age, male gender, dyslipidemia, stroke, cancer, witnessed arrest, initial shockable rhythm, and shorter low-flow time are other significant predictors of survival.

CONCLUSION: In adult, nontraumatic, EMS-treated OHCA patients, a higher LVEF 6 months prior to OHCA was associated with improved survival at hospital discharge.

DOI: 10.1097/MEJ.0000000000001181

PMID: 39283737 [Indexed for MEDLINE]

6. Intern Emerg Med. 2025 Apr;20(3):887-897. doi: 10.1007/s11739-024-03729-x. Epub 2024 Aug 2.

Prehospital point-of-care medication burden as a predictor of poor related outcomes in unselected acute diseases.

Jurado-Palomo J(1)(2), Sanz-García A(3), Martín-Conty JL(1), Polonio-López B(1), López-Izquierdo R(4)(5)(6), Sáez-Belloso S(7)(8), Del Pozo Vegas C(6)(9), Martín-Rodríguez F(6)(7).

How prehospital medication predicts patient outcomes is unclear. The aim of this work was to unveil the association between medication burden administration in prehospital care and short, mid, and long-term mortality (2, 30, and 365 day) in unselected acute diseases and to assess the potential of the number of medications administered for short, mid, and long-term mortality prediction. A prospective, multicenter, ambulance-based, cohort study was carried out in adults with unselected acute diseases managed by emergency medical services (EMS). The study was carried out in Spain with 44 ambulances and four hospitals. The principal outcome was cumulative mortality at 2, 30, and 365 days. Epidemiological variables, vital signs, and prehospital medications were collected. Patients were classified into four categories: no medication dispensed in prehospital care, one to two medications, three to four medications, and five or more medications. A total of 6401 patients were selected. The 2-day mortality associated with each group was 0.5%, 1.8%, 6.5%, and 18.8%. The 30-day mortality associated with each group was 3.8%, 6.2%, 13.5%, and 31.9%. The 365-day mortality associated with each group was 11%, 15.3%, 25.2%, and 45.7%. The predictive validity of the number of drugs administered, measured by the area under the curve, was 0.808, 0.720, and 0.660 for 2-, 30-, and 365-day mortality, respectively. Our results showed that prehospital drugs could provide relevant information regarding the mortality prediction of patients. The incorporation of this score could improve the management of high-risk patients by the EMS.

DOI: 10.1007/s11739-024-03729-x

PMID: 39090370 [Indexed for MEDLINE]

Journal report – duben 2025

PREHOSPITAL CARE

– systematic review & meta-analysis –

1. Int J Environ Res Public Health. 2025 Apr 17;22(4):629. doi: 10.3390/ijerph22040629.

Why Do Emergency Medical Service Employees (Not) Seek Organizational Help for Mental Health Support?: A Systematic Review.

Johnston S(1)(2), Waite P(1), Laing J(1), Rashid L(1), Wilkins A(1), Hooper C(1), Hindhaugh E(1), Wild J(1)(3).

Emergency medical service (EMS) ambulance employees play a critical role in emergency healthcare delivery. However, work-related experiences can compromise their mental health and job satisfaction. Despite available supportive services offered by EMS organizations, employee uptake remains low, while mental ill health and suicide rates remain higher than those of the general population. Understanding barriers to and enablers of such support is crucial for addressing factors that connect employees with the services designed to help. This systematic review identified 34 relevant articles and utilized an innovative process of integrating quantitative and qualitative aspects of the primary and gray literature to provide a qualitative synthesis of barriers and facilitators as perceived by EMS employees. Themes of employee (in)ability to ask for help, tailored person-centered support, and education and training about mental health were overarched by organizational culture. Barriers included perceived organizational obligation rather than genuine care, alongside machismo and stigma. Enablers included valuing and acknowledging employee risk by providing time and normalizing support utilization at work. Reframing machismo from dominance, competition, and toughness to respect, perseverance, and courage; promoting adaptive coping; and providing time and training were essential. Future research should aim to understand the factors influencing employee utilization of supportive interventions based on these themes.

DOI: 10.3390/ijerph22040629

PMCID: PMC12027444

PMID: 40283853 [Indexed for MEDLINE]

2. Prehosp Disaster Med. 2025 Apr;40(2):94-100. doi: 10.1017/S1049023X25000202. Epub 2025 Apr 8.

Prehospital Care Post-Road-Crash: A Systematic Review of the Literature.

Cuthbertson J(1)(2), Drummond G(3)(4).

OBJECTIVE: The aim of this study was to systematically review evidence that supports best practice post-crash response emergency care.

STUDY DESIGN: The research questions to achieve the study objective were developed using the Patient, Intervention, Control, Outcome standard following which a systematic literature review (SLR) of research related to prehospital post-road-crash was conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

RESULTS: A total of 89 papers were included in the analysis, presented according to the PRISMA guidelines.

CONCLUSIONS: This research explored and identified key insights related to emergency care post-road-crash response. The findings showed that interservice coordination and shared understanding of roles was recommended. Application of traditional practice of the "Golden Hour" has been explored and contested as a standard for all care. Notwithstanding this, timeliness of provision of care remains important to certain patient groups suffering certain injury types and is supported as part of a trauma system approach for patient care.

DOI: 10.1017/S1049023X25000202

PMCID: PMC12018007

PMID: 40195603

3. Prehosp Emerg Care. 2025 Apr 1:1-14. doi: 10.1080/10903127.2025.2483978.

Effectiveness of Prehospital Critical Care Scene Response for Major Trauma: A Systematic Review.

Penn J(1), McAleer R(2)(3), Ziegler C(4), Cheskes S(5)(6), Nolan B(6)(7), von Vopelius-Feldt J(6)(7).

OBJECTIVES: Major trauma is a leading cause of morbidity and mortality worldwide. It is unclear if the addition of a critical care response unit (CCRU) with capabilities comparable to hospital emergency departments might improve outcomes following major trauma, when

added to Basic or Advanced Life Support (BLS/ALS) prehospital care. This systematic review describes the evidence for a CCRU scene response model for major trauma.

METHODS: We searched Medline (Ovid), Embase (Ovid), Cochrane Central Register of Controlled Trials (Ovid), CINAHL (EBSCOhost), Science Citation Index Expanded (Web of Science), Conference Proceedings Citation Index - Science (Web of Science), LILACS (Latin American and Caribbean Health Sciences Literature) for relevant publications from 2003 to 2024. We included any study that compared CCRU and BLS/ALS care at the scene of major trauma, reported patient-focused outcomes, and utilized statistical methods to reduce bias and confounding. The risk of bias was assessed by two independent reviewers, using the ROBINS-I tool. Based on our a priori knowledge of the literature, a narrative analysis was chosen. The review was prospectively registered (PROSPERO ID CRD42023490668).

RESULTS: The search yielded 5243 unique records, of which 26 retrospective cohort studies and one randomized controlled trial met inclusion criteria. Sample sizes ranged from 308 to 153,729 patients. Eighteen of the 27 included studies showed associations between CCRUs and improved survival following trauma, which appear to be more consistently found in more critically injured and adult patients, as well as those suffering traumatic cardiac arrest. The remaining nine studies showed no significant difference in outcomes between CCRU and BLS/ALS care. Most studies demonstrated critical or severe risks of bias.

CONCLUSIONS: Current evidence examining CCRU scene response for major trauma suggests potential benefits in severely injury patients but is limited by overall low quality. Further high-quality research is required to confirm the benefits from CCRU scene response for major trauma.

DOI: 10.1080/10903127.2025.2483978

PMID: 40131291

4. Br J Sports Med. 2025 Apr 24;59(9):630-639. doi: 10.1136/bjsports-2024-108951.

Prehospital care of suspected spine-injured lacrosse athletes: a systematic search, evidence review, and consensus recommendations.

Bowman TG(1), Boergers RJ(2), Caswell SV(3), Conway D(4), Mills WJ(5), Putukian M(6), Merritt M(7), Vescovi JD(8), Strapp E(9), Loehr K(8)(10), Monnin J(11), Vozzo R(12), Hatch R(13), Wesley Siler C(14), Scarneo-Miller SE(15).

Lacrosse has experienced significant growth in popularity worldwide and will return to the Summer Olympic Games in 2028. While there are published consensus recommendations for

prehospital care of athletes with suspected spine injuries, there are currently no recommendations specific to lacrosse athletes with and without circulation, airway, or breathing (CAB) compromise. The document aims to determine evidence- and consensus-based best practices and provide implementation recommendations to guide healthcare professionals in the prehospital care of suspected spine-injured lacrosse athletes. We comprised a consensus group of 15 individuals with diverse clinical, research, and administrative experiences to ensure broad representation across lacrosse competition levels. Peer-reviewed scientific and medical research literature was systematically searched for articles on spine injury in lacrosse participants to derive evidence-based recommendations. Following a modified Delphi approach with three rounds of voting, the author panel developed ten consensus-based best practices and implementation recommendations related to the care of potentially spine-injured lacrosse athletes with and without CAB compromise. In addition, recommendations are provided to guide the implementation of key preparations before lacrosse participation, such as developing and distributing an emergency action plan, lacrosse-specific policies and procedures, and cardiopulmonary resuscitation and automated external defibrillator requirements. All recommendations obtained acceptable levels of agreeability, feasibility, and clarity from at least 80% of the panel. The recommendations provide prehospital care guidance for healthcare professionals and event organisers aimed at improving patient outcomes following suspected spine injury.

DOI: 10.1136/bjsports-2024-108951

PMID: 39922569 [Indexed for MEDLINE]

5. Emerg Med J. 2025 Apr 22;42(5):334-342. doi: 10.1136/emermed-2023-213860.

Video laryngoscopy may improve the intubation outcomes in critically ill patients: a systematic review and meta-analysis of randomised controlled trials.

Zhang K(#)(1), Zhong C(#)(1), Lou Y(#)(1), Fan Y(1), Zhen N(1), Huang T(1), Chen C(1), Shan H(1), Du L(1), Wang Y(1), Cui W(1), Cao L(2), Tian B(2), Zhang G(2)(3).

BACKGROUND: The role of video laryngoscopy in critically ill patients requiring emergency tracheal intubation remains controversial. This systematic review and meta-analysis aimed to evaluate whether video laryngoscopy could improve the clinical outcomes of emergency tracheal intubation.

METHODS: We searched the PubMed, Embase, Scopus and Cochrane databases up to 5 September 2024. Randomised controlled trials comparing video laryngoscopy with direct

laryngoscopy for emergency tracheal intubation were analysed. The primary outcome was the first-attempt success rate, while secondary outcomes included intubation time, glottic visualisation, in-hospital mortality and complications.

RESULTS: Twenty-six studies (6 in prehospital settings and 20 in hospital settings) involving 5952 patients were analysed in this study. Fifteen studies had low risk of bias. Overall, there was no significant difference in first-attempt success rate between two groups (RR 1.05, 95% CI 0.97 to 1.13, p=0.24, I2=89%). However, video laryngoscopy was associated with a higher first-attempt success rate in hospital settings (emergency department: RR 1.13, 95% CI 1.03 to 1.23, p=0.007, I2=85%; intensive care unit: RR 1.16, 95% CI 1.05 to 1.29, p=0.003, I2=68%) and among inexperienced operators (RR 1.15, 95% CI 1.03 to 1.28, p=0.01, I2=72%). Conversely, the first-attempt success rate with video laryngoscopy was lower in prehospital settings (RR 0.75, 95% CI 0.57 to 0.99, p=0.04, I2=95%). There were no differences for other outcomes except for better glottic visualisation (RR 1.11, 95% CI 1.03 to 1.20, p=0.005, I2=91%) and a lower incidence of oesophageal intubation (RR 0.42, 95% CI 0.24 to 0.71, p=0.001, I2=0%) when using video laryngoscopy.

CONCLUSIONS: In hospital settings, video laryngoscopy improved first-attempt success rate of emergency intubation, provided superior glottic visualisation and reduced incidence of oesophageal intubation in critically ill patients. Our findings support the routine use of video laryngoscopy in the emergency department and intensive care units.

PROSPERO REGISTRATION NUMBER: CRD 42023461887.

DOI: 10.1136/emermed-2023-213860

PMID: 39358006 [Indexed for MEDLINE]