

# Paediatric Emergency Department

## Evidence Update



## December 2017

Respecting everyone  
Embracing change  
Recognising success  
Working together  
**Our hospitals.**



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# Training Calendar 2017/18

*All sessions are one hour*

## December (12.00-13.00)

7 <sup>th</sup> (Thu)	Statistics
14 <sup>th</sup> (Thu)	Literature Searching
20 <sup>th</sup> (Wed)	Critical Appraisal

## January (13.00-14.00)

4 <sup>th</sup> (Thu)	Statistics
8 <sup>th</sup> (Mon)	Literature Searching
18 <sup>th</sup> (Thu)	Critical Appraisal
24 <sup>th</sup> (Wed)	Statistics

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**Outreach:** Your Outreach Librarian can help facilitate evidence-based practice for all in the team, as well as assisting with academic study and research. We also offer one-to-one or small group training in **literature searching, critical appraisal and medical statistics**. Get in touch: [library@uhbristol.nhs.uk](mailto:library@uhbristol.nhs.uk)

**Literature searching:** We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a one-to-one session where we can guide you through the process of creating a well-focused literature research. Please email requests to [library@uhbristol.nhs.uk](mailto:library@uhbristol.nhs.uk)

# Key Papers

Below is a selection of articles that were recently added to the healthcare databases.

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: [library@uhbristol.nhs.uk](mailto:library@uhbristol.nhs.uk)

## **PEM Studies, December 2017**

[Frequency and Characterization of Tracheal Intubation Adverse Events in Pediatric Sepsis \(Pediatr Crit Care Med, abstract\)](#)

[Appropriate and Inappropriate Treatment of Acute Otitis Media in the Pediatric Emergency Department \(Pediatr Infect Dis J, abstract\)](#)

[Diagnosis and management of group A streptococcal pharyngitis and associated complications \(Pediatr Emerg Med Pract, abstract\)](#)

[Practice Variation in Acute Bronchiolitis: A Pediatric Emergency Research Networks Study \(Pediatrics, abstract\)](#)

[Accuracy of Clinician Suspicion of Lyme Disease in the Emergency Department \(Pediatrics, abstract\)](#)

[Accuracy and Discomfort of Different Types of Intranasal Specimen Collection Methods for Molecular Influenza Testing in Emergency Department Patients \(Ann Emerg Med, abstract\)](#)

[A Systematic Review and Meta-Analysis of the Management and Outcomes of Isolated Skull Fractures in Children \(Ann Emerg Med, abstract\)](#)

[A Randomized Controlled Trial of a Single Dose Furosemide to Improve Respiratory Distress in Moderate to Severe Bronchiolitis \(J Emerg Med, abstract\)](#)

[Hyponatremia in infants with new onset moderate-severe bronchiolitis: A cross-sectional study \(Respir Med, abstract\)](#)

[Randomized Trial of Dexamethasone Versus Prednisone for Children with Acute Asthma Exacerbations \(J Pediatr, abstract\)](#)

[Upside-down position for the out of hospital management of children with supraventricular tachycardia \(Int J Cardiol, abstract\)](#)

[Manipulation and reduction of paediatric forearm fractures using Es-ketamine in a paediatric emergency department - a 5 year study \(Emerg Med J, abstract\)](#)

[Paediatric traumatic cardiac arrest in England and Wales a 10 year epidemiological study \(Emerg Med J, abstract\)](#)

[Paediatric emergency clinicians are rarely exposed to non-airway critical procedures: a predict/PERN study \(Emerg Med J, abstract\)](#)

[Paediatric traumatic cardiac arrest - the development of a treatment algorithm \(Emerg Med J, abstract\)](#)

## **Pediatrics**

[Oral Analgesics Utilization for Children With Musculoskeletal Injury \(OUCH Trial\): An RCT](#)  
Le May, S. et al. Published online October 11 2017

## **Annals of Emergency Medicine**

[Do All Children Who Present With a Complex Febrile Seizure Need a Lumbar Puncture?](#)

Guedj, R. et al. July 2017, Volume 70, Issue 1, Pages 52–62.e6

**STUDY OBJECTIVE** We assess the prevalences of bacterial meningitis and herpes simplex virus meningoencephalitis (HSV-ME) in children with a complex febrile seizure and determine these prevalences in the subgroup of children with a clinical examination result not suggestive of meningitis or encephalitis.

**METHODS** This multicenter retrospective study was conducted in 7 pediatric emergency departments (EDs) in the region of Paris, France. Visits of patients aged 6 months to 5 years for a complex febrile seizure from January 2007 to December 2011 were analyzed. We defined a subgroup of patients whose clinical examination result was not suggestive of meningitis or encephalitis. Bacterial meningitis and HSV-ME were sequentially sought for by analyzing bacteriologic and viral data at the visit, looking for data from a second visit to the hospital after the index visit, and telephoning the child's parents.

**RESULTS** From a total of 1,183,487 visits in the 7 pediatric EDs, 839 patients presented for a complex febrile seizure, of whom 260 (31.0%) had a lumbar puncture. The outcomes bacterial meningitis and HSV-ME were ascertainable for 715 (85%) and 657 (78.3%) visits, respectively, and we found 5 cases of bacterial meningitis (0.7% [95% confidence interval [CI] 0.2% to 1.6%]) and no HSV-ME (0% [95% CI 0% to 0.6%]). Among the 630 visits of children with a clinical examination result not suggesting meningitis or encephalitis, we found no bacterial meningitis (0% [95% CI 0% to 0.7%]) and no HSV-ME (0% [95% CI 0% to 0.8%]).

**CONCLUSION** In children with a complex febrile seizure, bacterial meningitis and HSV-ME are unexpected events when the clinical examination after complex febrile seizure is not suggestive of meningitis or encephalitis.

**Acta Paediatrica**

Volume 106, Issue 12

[Treatment methods for respiratory syncytial virus bronchiolitis need to be evaluated before they are introduced on a large scale \(pages 1900–1901\)](#) Bill Hesselmar

[Boys have better short-term and long-term survival rates after intensive care admissions than girls \(pages 1973–1978\)](#) E Johansson Frigyesi, P Andersson and A Frigyesi

[National high-flow nasal cannula and bronchiolitis survey highlights need for further research and evidence-based guidelines \(pages 1998–2003\)](#) Paula Sokuri, Paula Heikkilä and Matti Korppi

[Low age, low birthweight and congenital heart disease are risk factors for intensive care in infants with bronchiolitis \(pages 2004–2010\)](#) Minna Mecklin, Paula Heikkilä and Matti Korppi

**European Journal of Pediatrics**

Volume 176, Issue 12

[Congenital pulmonary airway malformations: state-of-the-art review for pediatrician's use](#)

Claire Leblanc, et al

[Routine gastric residual volume measurement and energy target achievement in the PICU: a comparison study](#) Lyvonne N. Tume, et al

[A mixed methods evaluation of paediatric trainee preparedness to manage cardiopulmonary arrests](#)

Órla Walsh, et al

[Medication errors in pediatric inpatients: a study based on a national mandatory reporting system](#)

Rikke Mie Rishoej, et al

**Pediatric Anesthesia**

Volume 27, Issue 12

[The anatomy of the pediatric airway: Has our knowledge changed in 120 years? A review of historic and recent investigations of the anatomy of the pediatric larynx](#)

Josef Holzki, et al

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## **Frontiers in Pediatrics**

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## **Intensive Care Medicine**

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## **Pediatric Critical Care Medicine**

[November 2017 - Volume 18 - Issue 11](#)

## Latest Evidence

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### External laryngeal manipulation during endotracheal intubation in children (December 2017)

In a retrospective study of data from an international registry of over 7800 infants and children undergoing endotracheal intubation in pediatric intensive care units, external laryngeal manipulation (ELM) was associated with lower first- pass successful intubation compared with no manipulation (59 versus 68 percent, respectively) [25]. The difference remained significant after adjustment for potential confounders, although residual confounding may still contribute to this finding. ELM may improve the glottic view during laryngoscopy in selected patients (eg, children with anteriorly placed airways due to congenital anomalies or trauma patients with cervical spinal motion restriction in place), but routine use for endotracheal intubation in children does not appear to be beneficial. (See ["Emergency endotracheal intubation in children", section on 'Adjusting for suboptimal view'](#).)

### Methemoglobinemia from antifreeze (November 2017)

Methemoglobinemia, which may be fatal, can be caused by exposure to a number of medications as well as certain solvents, pesticides, and dyes (table 3); the product label or safety data sheet may not always include information about these chemicals. As an example, an individual who drank antifreeze was found to have methemoglobinemia due to nitrites or nitrates that were not listed on the safety data sheet [27]. Clinicians should maintain a high level of suspicion for methemoglobinemia in patients with cyanosis and findings related to tissue hypoxia (eg, tachycardia, headache, lethargy). (See ["Clinical features, diagnosis, and treatment of methemoglobinemia", section on 'Other chemicals'](#).)

**NICE** National Institute for  
Health and Care Excellence

Nothing relevant to add

 **Cochrane**  
Library

Nothing relevant to add



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**Contact your Outreach Librarian:**

**Helen Pullen**

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