University Hospitals Bristol NHS
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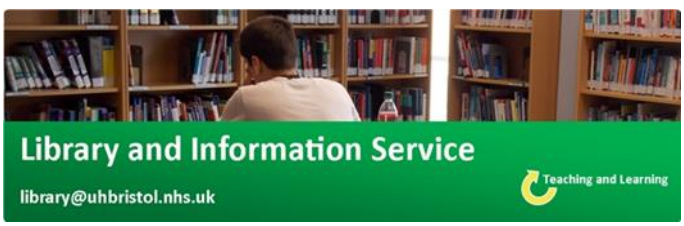
Emergency Medicine

Current Awareness Newsletter

January 2017 (Quarterly)

Respecting everyone
Embracing change
Recognising success
Working together
Our hospitals.



Lunchtime Drop-in Sessions

All sessions last one hour

January (13.00)

Tues 10th	**Literature Searching**
Wed 18th	**Critical Appraisal**
Thurs 26th	**Statistics**

February (12.00)

Fri 3rd	**Literature Searching**
Mon 6th	**Critical Appraisal**
Tue 14th	**Statistics**
Wed 22nd	**Literature Searching**

March (13.00)

Thurs 2nd	**Critical Appraisal**
Fri 10th	**Interpreting Statistics**
Mon 13th	**Literature Searching**
Tues 21st	**Critical Appraisal**

Librarians on demand!

Do you urgently need to find evidence to support your treatment of a patient? Would you like immediate information about a particular therapy, practice, condition, or other clinical need?

The Library can provide swift assistance with a range of our services, including literature searches and access to full text articles.

You can discuss your **urgent literature search** needs with a librarian immediately by calling extension 20105. A librarian can also be with you in your clinical area usually within 15 minutes.

For **speedy article requests** and other library services, email library@uhbristol.nhs.uk. If you specify your urgent need, we will prioritise this.

Contents

Your Outreach Librarian- Jo Hooper

Whatever your information needs, the library is here to help. As your Outreach Librarian I offer **literature searching services** as well as training and guidance in **searching the evidence** and **critical appraisal** – just email me at library@uhbristol.nhs.uk

Outreach: Your Outreach Librarian can help facilitate evidence-based practise for all in the oral and maxillofacial surgery team, as well as assisting with academic study and research. We can help with **literature searching, obtaining journal articles and books**, and setting up individual **current awareness alerts**. We also offer one-to-one or small group training in **literature searching, accessing electronic journals, and critical appraisal**. Get in touch: 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 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence. Please email requests to library@uhbristol.nhs.uk

Tables of Contents from Emergency Medicine journals

Click on the hyperlinked title (+ Ctrl) for contents. If you require any of the articles in full please email: library@uhbristol.nhs.uk

Emergency Medicine Journal

January 2017; Volume 34, Issue 1

Annals of Emergency Medicine

January 2017; Volume 69, Issue 1

Academic Emergency Medicine

December 2016; Volume 23, Issue 12

European Journal of Emergency Medicine

February 2017; Volume 24, Issue 1

Updates

UpToDate®

OpenAthens login required. Register here: https://openathens.nice.org.uk/

What's new in emergency medicine

Authors: Jonathan Grayzel, MD, FAAEM James F Wiley, II, MD, MPH

Literature review current through: Dec 2016. | **This topic last updated:** Jan 04, 2017.

Cochrane Library

No new relevant evidence

NICE National Institute for Health and Care Excellence
No new relevant evidence

To access electronic resources you need an
NHS Athens username and password

To register, click on the link:
https://openathens.nice.org.uk/

You need to register using an NHS PC and an NHS email address.

Registration is a quick, simple process, and will give you access to a huge range of online subscription resources, including:

UpToDate

NHS Evidence

E-journals

E-books

For more information or help with setting up your Athens account, email:
library@uhbristol.nhs.uk

Current Awareness Database Articles

If you require full articles please email: library@uhbristol.nhs.uk

The 4-hour standard is a meaningful quality indicator: correlation of performance with emergency department crowding.

Author(s): Higginson, Ian; Kehoe, Anthony; Whyatt, Justin; Smith, Jason E

Source: European journal of emergency medicine : official journal of the European Society for Emergency Medicine; Feb 2017; vol. 24 (no. 1); p. 25-28

Publication Type(s): Journal Article

Abstract: The 4-h standard performance is a controversial quality indicator. Crowding in emergency departments (EDs) causes increased patient morbidity and mortality. The aim of this study was to investigate the relationship between 4-h standard performance and ED crowding as measured by occupancy. A retrospective observational study was carried out using the computerized Emergency Department Information System. Daily occupancy was considered in three ways: as minutes per day spent at occupancy thresholds of 70, 80, 90 and 100%; as the peak occupancy of resuscitation and majors beds at any point in the day; and as a percentage of the total potential ED bed minutes used during the day. An inverse relationship was observed between occupancy and 4-h standard performance using each method. Performance could be sustained at 70% occupancy, but deteriorated in a linear manner at a progressively increasing rate at 80, 90 and 100% occupancy (all P<0.01). A stepwise decrease in the mean performance was observed with increasing peak occupancy (P<0.001). A similar decrease in performance was observed with increasing 24-h overall occupancy (P<0.001). This study has identified a clear and consistent correlation between ED crowding and performance against the 4-h standard. Because crowding is associated with harm, the 4-h standard is a meaningful quality metric for UK hospitals. Systematic measurement of ED crowding using occupancy may play a role in improving the quality of care delivered within the urgent care system.

Management and Outcomes of Bleeding Events in Patients in the Emergency Department Taking Warfarin or a Non-Vitamin K Antagonist Oral Anticoagulant.

Author(s): Singer, Adam J; Quinn, Adam; Dasgupta, Neil; Thode, Henry C

Source: The Journal of emergency medicine; Jan 2017; vol. 52 (no. 1); p. 1

Publication Type(s): Journal Article

Abstract: Most comparisons of bleeding patients who are taking warfarin or a non-vitamin K oral anticoagulant (NOAC) have been limited to admitted patients and major bleeding events in well-controlled, clinical trial settings. We describe the clinical characteristics, interventions, and outcomes in patients who are taking warfarin or a NOAC who presented to the emergency department (ED) with any bleeding event. We conducted a structured, retrospective, observational study of nonvalvular atrial fibrillation, pulmonary embolism, or deep vein thrombosis warfarin- or NOAC-treated patients presenting with any bleeding event to a large, academic ED between January 2012 and March 2015. We used descriptive statistics to summarize baseline characteristics, treatments, and outcomes and performed subgroup analyses based on the type of anticoagulant and site of bleeding. The electronic search yielded 95 cases of patients taking a NOAC (i.e., dabigatran [33], rivaroxaban [32], or abixaban [30]) and 342 patients taking warfarin. Reversal agents were rarely used in all anticoagulant groups. Case fatality rates were similar among warfarin-

and NOAC-treated patients for gastrointestinal bleeding (7% vs. 7%) and intracranial hemorrhage (18% vs. 4%), respectively. After adjustment for other factors, only intracranial hemorrhage (odds ratio 4.4; 95% confidence interval 1.4-13.3) was associated with mortality. Despite the rare use of reversal strategies, mortality was low and outcomes were comparable among patients with bleeding events presenting to the ED while taking a NOAC compared with warfarin. Copyright © 2016 Elsevier Inc. All rights reserved.

Variables associated with administration of analgesia, nurse-initiated analgesia and early analgesia in the emergency department.

Source: Emergency medicine journal : EMJ; Jan 2017; vol. 34 (no. 1); p. 13-19

Publication Type(s): Journal Article

Abstract: To determine the patient and clinical variables associated with administration of any analgesia, nurse-initiated analgesia (NIA, prescribed and administered by a nurse) and early analgesia (within 30 min of presentation). We undertook a retrospective cohort study of patients who presented to a metropolitan ED in Melbourne, Australia, during July and August, 2013. The ED has an established NIA programme. Patients were included if they were aged 18 years or more and presented with a painful complaint. The study sample was randomly selected from a list of all eligible patients. Data were extracted electronically from the ED records and by explicit extraction from the medical record. Logistic regression models were constructed to assess associations with the three binary study end points. 1289 patients were enrolled. Patients were less likely to receive any analgesia if they presented 08:00-15:59 hours (OR 0.67, 95% CI 0.46 to 0.98) or 16:00-24:00 hours (OR 0.55, 95% CI 0.37 to 0.80) were triage category 5 (OR 0.20, 95% CI 0.08 to 0.49) or required an interpreter (OR 0.34, 95% CI 0.14 to 0.86). Patients were less likely to receive NIA or early analgesia if they were aged 56 years or more (OR 0.70 and 0.63; OR 0.57 and 0.21, respectively) or if they had received ambulance analgesia (OR 0.59, 95% CI 0.36 to 0.95; OR 0.38, 95% CI 0.20 to 0.74, respectively). Patients who present during the daytime, have a triage category of 5 or require an interpreter are less likely to receive analgesia. Older patients and those who received ambulance analgesia are less likely to receive NIA or early analgesia. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to http://www.bmj.com/company/products-services/rights-and-licensing/.

Design and challenges of a randomized clinical trial of medical expulsive therapy (tamsulosin) for urolithiasis in the emergency department.

Author(s): Burrows, Pamela K; Hollander, Judd E; Wolfson, Allan B; Kurz, Michael C; STONE Study Investigators

Source: Contemporary clinical trials; Jan 2017; vol. 52 ; p. 91-94

Publication Type(s): Journal Article

Abstract: Urolithiasis or urinary stone disease has been estimated to affect about 1 in 11 Americans. Patients with urinary stone disease commonly present to the emergency department for management of their acute pain. In addition to providing analgesia, administration of drug (medical expulsive therapy) is often prescribed to assist passage of the urinary stone. In this methodology paper, we describe the design of a prospective, multi-center, randomized, double-blind placebo controlled clinical trial of the alpha-adrenergic blocker, tamsulosin, to evaluate its effectiveness as medical expulsive therapy. In addition, we describe the unique challenges of conducting a trial of this type within the setting of the emergency department. Copyright © 2016 Elsevier Inc. All rights reserved.

Predictors of fever-related admissions to a paediatric assessment unit, ward and reattendances in a South London emergency department: the CABIN 2 study.

Author(s): Bustinduy, Amaya L; Chis Ster, Irina; Shaw, Rebecca; Irwin, Adam; Thiagarajan, Jaiganesh;

Source: Archives of disease in childhood; Jan 2017; vol. 102 (no. 1); p. 22-28

Publication Type(s): Journal Article

Abstract: To explore the risk factors for ward and paediatric assessment unit (PAU) admissions from the emergency department (ED). Prospective observational study. Febrile children attending a large tertiary care ED during the winter of 2014-2015. Ward and PAU admissions, National Institute for Health and Care Excellence (NICE) guidelines classification, reattendance to the ED within 28 days and antibiotic use. A total of 1097 children attending the children's ED with fever were analysed. Risk factors for PAU admission were tachycardia (RR=1.1, 95% CI (1 to 1.1)), ill-appearance (RR=2.2, 95% CI (1.2 to 4.2)), abnormal chest findings (RR=2.1, 95% CI (1.2 to 4.3)), categorised as NICE amber (RR 1.7 95% CI (1.2 to 2.5)). There was a 30% discordance between NICE categorisation at triage and statistical internal validation. Predictors of ward admission were a systemic (RR=6.9, 95% CI (2.4 to 19.8)) or gastrointestinal illness (RR=3.8, 95% (1.4 to 10.4)) and categorised as NICE Red (RR=5.9, 95% CI (2.2 to 15.3)). Only 51 children had probable bacterial pneumonia (4.6%), 52 children had a proven urinary tract infection (4.2%), with just 2 (0.2%) positive blood cultures out of 485 (44%) children who received an antibiotic. 15% of all children reattended by 28 days and were more likely to have been categorised as Amber and had investigations on initial visit. Risk factors for PAU and ward admissions are different in this setting with high reattendance rates and very low proportion of confirmed/probable serious bacterial infections. Future studies need to focus on reducing avoidable admissions and antibiotic treatment. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to http://www.bmj.com/company/products-services/rights-and-licensing/.

Comparison of peripheral and central capillary refill time in febrile children presenting to a paediatric emergency department and its utility in identifying children with serious bacterial infection.

Author(s): de Vos-Kerkhof, Evelien; Krecinic, Tarik; Vergouwe, Yvonne; Moll, Henriëtte A; Nijman,

Source: Archives of disease in childhood; Jan 2017; vol. 102 (no. 1); p. 17-21

Publication Type(s): Journal Article

Available in full text at Archives of disease in childhood - from Highwire Press

Abstract: To determine the agreement between peripheral and central capillary refill time (pCRT/cCRT) and their diagnostic values for detecting serious bacterial infection (SBI) in febrile children attending the paediatric emergency department (ED). Prospective observational study. Paediatric ED, Erasmus Medium Care-Sophia Children's hospital, the Netherlands. 1193 consecutively included, previously healthy, febrile children (1 month-16 years) with both pCRT measurements and cCRT measurements available. SBI diagnosis was based on abnormal radiographic findings and/or positive cultures from normally sterile locations in addition to clinical criteria. Agreement between pCRT and cCRT (Cohen's κ), overall and stratified for age and body temperature. The diagnostic value of pCRT and cCRT for SBI was assessed with logistic regression. Overall agreement was 0.35 (95% CI 0.27 to 0.43; considered 'fair'). Although not significant, agreement was lower in children aged 1-39.5°C. Abnormal pCRT (>2 s) was observed in 153 (12.8%; 95% CI 10.9% to 14.7%) and abnormal cCRT in 55 (4.6%; 95% CI 3.4% to 5.8%) children. The OR of abnormal pCRT (>2 s) for predicting SBI was 1.10 (95% CI 0.65 to 1.84). For abnormal cCRT (>2 s), the OR was 0.43 (95% CI 0.13 to 1.39). The pCRT and cCRT values showed only fair agreement in a general population of febrile children at the ED, and no significant association with age or body temperature was found. Only a small part of febrile children at risk for serious infections at the ED

show abnormal CRT values. Both abnormal pCRT and cCRT (defined as >2 s) performed poorly and were non-significant in this study detecting SBI in a general population of febrile children.
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Acute cardioversion vs a wait-and-see approach for recent-onset symptomatic atrial fibrillation in the emergency department: Rationale and design of the randomized ACWAS trial.

Author(s): Dudink, Elton; Essers, Brigitte; Holvoet, Wouter; Weijs, Bob; Luermans, Justin; Ramanna,

Source: American heart journal; Jan 2017; vol. 183 ; p. 49-53

Publication Type(s): Journal Article

Abstract: Current standard of care for patients with recent-onset atrial fibrillation (AF) in the emergency department aims at urgent restoration of sinus rhythm, although paroxysmal AF is a condition that resolves spontaneously within 24 hours in more than 70% of the cases. A wait-and-see approach with rate-control medication only and when needed cardioversion within 48 hours of onset of symptoms is hypothesized to be noninferior, safe, and cost-effective as compared with current standard of care and to lead to a higher quality of life. The ACWAS trial (NCT02248753) is an investigator-initiated, randomized, controlled, 2-arm noninferiority trial that compares a wait-and-see approach to the standard of care. Consenting adults with recent-onset symptomatic AF in the emergency department without urgent need for cardioversion are eligible for participation. A total of 437 patients will be randomized to either standard care (pharmacologic or electrical cardioversion) or the wait-and-see approach, consisting of symptom reduction through rate control medication until spontaneous conversion is achieved, with the possibility of cardioversion within 48 hours after onset of symptoms. Primary end point is the presence of sinus rhythm on 12-lead electrocardiogram at 4 weeks; main secondary outcomes are adverse events, total medical and societal costs, quality of life, and cost-effectiveness for 1 year. The ACWAS trial aims at providing evidence for the use of a wait-and-see approach for patients with recent-onset symptomatic AF in the emergency department. Copyright © 2016 The Authors. Published by Elsevier Inc. All rights reserved.

What is the impact of an electronic test result acknowledgement system on Emergency Department physicians' work processes? A mixed-method pre-post observational study

Author(s): Georgiou A.; McCaughey E.J.; Tariq A.; Walter S.R.; Li J.; Callen J.; Westbrook J.I.;

Source: International Journal of Medical Informatics; Mar 2017; vol. 99 ; p. 29-36

Publication Type(s): Journal: Article

Abstract: Objective To examine the impact of an electronic Results Acknowledgement (eRA) system on emergency physicians' test result management work processes and the time taken to acknowledge microbiology and radiology test results for patients discharged from an Emergency Department (ED). Methods The impact of the eRA system was assessed in an Australian ED using: a) semi-structured interviews with senior emergency physicians; and b) a time and motion direct observational study of senior emergency physicians completing test acknowledgment pre and post the implementation of the eRA system. Results The eRA system led to changes in the way results and actions were collated, stored, documented and communicated. Although there was a non-significant increase in the average time taken to acknowledge results in the post period, most types of acknowledgements (other than simple acknowledgements) took less time to complete. The number of acknowledgements where physicians sought additional information from the Electronic Medical Record (EMR) rose from 12% pre to 20% post implementation of eRA. Conclusions Given that the type of results are unlikely to have changed significantly across the pre and post implementation

periods, the increase in the time physicians spent accessing additional clinical information in the post period likely reflects the greater access to clinical information provided by the integrated electronic system. Easier access to clinical information may improve clinical decision making and enhance the quality of patient care. For instance, in situations where a senior clinician, not initially involved in the care process, is required to deal with the follow-up of non-normal results. Copyright © 2016 Elsevier Ireland Ltd

A response-adaptive design of initial therapy for emergency department patients with heart failure

Author(s): Wen S.; Ning J.; Berry D.; Collins S.

Source: Contemporary Clinical Trials; Jan 2017; vol. 52 ; p. 46-53

Publication Type(s): Journal: Article

Abstract: Finding safe and effective treatments for acute heart failure syndrome (AHFS) is a high priority. More than 80% of patients with AHFS who present to emergency departments are treated identically with intravenous diuretics, despite recognition of the syndrome's heterogeneity. We hypothesize that matching patient profiles with "personalized" AHFS treatments will improve outcomes. Matching multiple heterogeneous clinical profiles with a number of potentially effective treatments requires an adaptive trial design that can adjust for these complexities. We propose a Bayesian response-adaptive randomization trial design for AHFS patients. Baseline information collected for each patient with AHFS prior to randomization includes blood pressure, renal function, and dyspnea severity. The primary outcome is discharge readiness within 23h of presentation and no unplanned emergency visits or admissions for acute heart failure within 7days of discharge. We use a Bayesian logistic regression model to characterize the association between primary outcome and patient profile. We adaptively randomize patients to one of five treatments, basing the randomization probability on the cumulative data from the ongoing trial and fitting results from the regression model. Simulations show high probability of selecting the best treatment corresponding to the patient's profile while allocating more patients to the efficacious treatments within the trial. Copyright © 2016 Elsevier Inc.

A systematic review of observational pain assessment instruments for use with nonverbal intubated critically ill adult patients in the emergency department: an assessment of their suitability and psychometric properties.

Author(s): Varndell, Wayne; Fry, Margaret; Elliott, Doug

Source: Journal of Clinical Nursing; Jan 2017; vol. 26 (no. 1/2); p. 7-32

Publication Type(s): Academic Journal

Exercise: Systematic Reviews

There are 7 key steps that need to be taken when carrying out a Systematic Review. Can you put them in order?

A. Quality assessment

B. Study selection

C. Synthesis

D. Data extraction

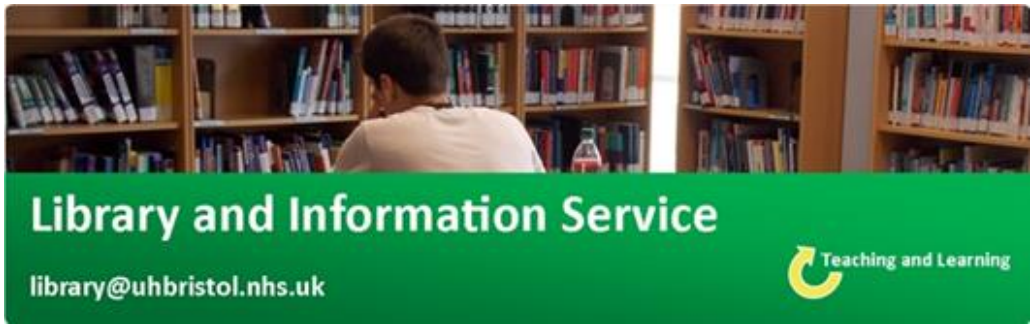
E. Define the question

F. Literature search

G. Writing up

*For assistance with carrying out a **systematic review search** or a **literature search**, please email library@uhbristol.nhs.uk.*

Answers: 1E; 2F; 3B; 4D; 5A; 6C; 7G



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