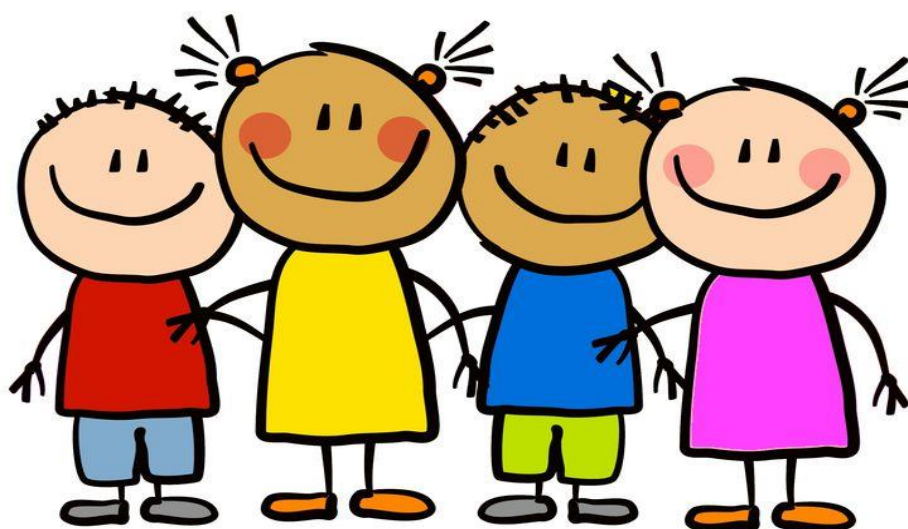


General Paediatrics

Current Awareness Newsletter

January 2017



Respecting everyone
Embracing change
Recognising success
Working together
Our hospitals.



Training Calendar 2017

All sessions are 1 hour

January (13.00)

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

February (12.00)

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

Your Outreach Librarian – Helen Pullen

Whatever your information needs, the library is here to help. Just email us at library@uhbristol.nhs.uk

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

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. Please email requests to library@uhbristol.nhs.uk

The Latest Evidence

NICE National Institute for
Health and Care Excellence

<https://www.nice.org.uk/guidance/population-groups/children-and-young-people>

 **Cochrane**
Library

<http://www.cochranelibrary.com/topic/Child%20health/>

Journal Tables of Contents

The most recent issues of key journals. If you would like any of the papers in full text then please email the library: library@uhbristol.nhs.uk

NEJM

January 5, 2017 Vol. 376 No. 1

Epidemiology of Acute Kidney Injury in Critically Ill Children and Young Adults

BACKGROUND

The epidemiologic characteristics of children and young adults with acute kidney injury have been described in single-center and retrospective studies. We conducted a multinational, prospective study involving patients admitted to pediatric intensive care units to define the incremental risk of death and complications associated with severe acute kidney injury.

METHODS

We used the Kidney Disease: Improving Global Outcomes criteria to define acute kidney injury. Severe acute kidney injury was defined as stage 2 or 3 acute kidney injury (plasma creatinine level ≥ 2 times the baseline level or urine output <0.5 ml per kilogram of body weight per hour for ≥ 12 hours) and was assessed for the first 7 days of intensive care. All patients 3 months to 25 years of age who were admitted to 1 of 32 participating units were screened during 3 consecutive months. The primary outcome was 28-day mortality.

RESULTS

A total of 4683 patients were evaluated; acute kidney injury developed in 1261 patients (26.9%; 95% confidence interval [CI], 25.6 to 28.2), and severe acute kidney injury developed in 543 patients (11.6%; 95% CI, 10.7 to 12.5). Severe acute kidney injury conferred an increased risk of death by day 28 after adjustment for 16 covariates (adjusted odds ratio, 1.77; 95% CI, 1.17 to 2.68); death occurred in 60 of the 543 patients (11.0%) with severe acute kidney injury versus 105 of the 4140 patients (2.5%) without severe acute kidney injury ($P < 0.001$). Severe acute kidney injury was associated with increased use of mechanical ventilation and renal-replacement therapy. A stepwise increase in 28-day mortality was associated with worsening severity of acute kidney injury ($P < 0.001$ by log-rank test). Assessment of acute kidney injury according to the plasma creatinine level alone failed to identify acute kidney injury in 67.2% of the patients with low urine output.

CONCLUSIONS

Acute kidney injury is common and is associated with poor outcomes, including increased mortality, among critically ill children and young adults. (Funded by the Pediatric Nephrology Center of Excellence at Cincinnati Children's Hospital Medical Center and others; AWARE ClinicalTrials.gov number, [NCT01987921](https://clinicaltrials.gov/ct2/show/study/NCT01987921).)

Pediatrics

January 2017, VOLUME 139 / ISSUE 1

Families' Priorities Regarding Hospital-to-Home Transitions for Children With Medical Complexity

BACKGROUND:

National health care policy recommends that patients and families be actively involved in discharge planning. Although children with medical complexity (CMC) account for more than half of pediatric readmissions, scalable, family-centered methods to effectively engage families of CMC in discharge planning are lacking. We aimed to systematically examine the scope of preferences, priorities, and goals of parents of CMC regarding planning for hospital-to-home transitions and to ascertain health care providers' perceptions of families' transitional care goals and needs.

METHODS:

We conducted semistructured interviews with parents and health care providers at a tertiary care hospital. Interviews were continued until thematic saturation was reached. Interviews were audio recorded, transcribed verbatim, and analyzed to identify emergent themes via a general inductive approach.

RESULTS:

Thirty-nine in-depth interviews were conducted, including 23 with family caregivers of CMC and 16 with health care providers. Families' priorities, preferences, and goals for hospital-to-home transitions aligned with 7 domains: effective engagement with health care providers, respect for families' discharge readiness, care coordination, timely and efficient discharge processes, pain and symptom control, self-efficacy to support recovery and ongoing child development, and normalization and routine. These domains also emerged in interviews with health care providers, although there were minor differences in themes discussed.

CONCLUSIONS: Although CMC have diverse transitional care needs, their families' priorities, preferences, and goals aligned with 7 domains that bridged their hospital admission with reestablishment of a home routine. This research provides essential foundational data to engage families in discharge planning, guiding the operationalization of national health policy recommendations.

Archives of disease in Childhood

January 2017, Volume 102, Issue 1

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

Objective 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).

Design Prospective observational study.

Setting Paediatric ED, Erasmus Medium Care-Sophia Children's hospital, the Netherlands.

Patients 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.

Main outcome measures 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.

Results Overall agreement was 0.35 (95% CI 0.27 to 0.43; considered 'fair'). Although not significant, agreement was lower in children aged 1–<5 years (κ : 0.15 (95% CI 0.04 to 0.27)) and decreased with higher body temperatures with κ ranging from 0.55 (95% CI 0.32 to 0.79) for temperature <37.5°C to 0.21 (95% CI 0.07 to 0.34) for temperature >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).

Conclusions 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.

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

Abstract

Objective To explore the risk factors for ward and paediatric assessment unit (PAU) admissions from the emergency department (ED).

Design Prospective observational study.

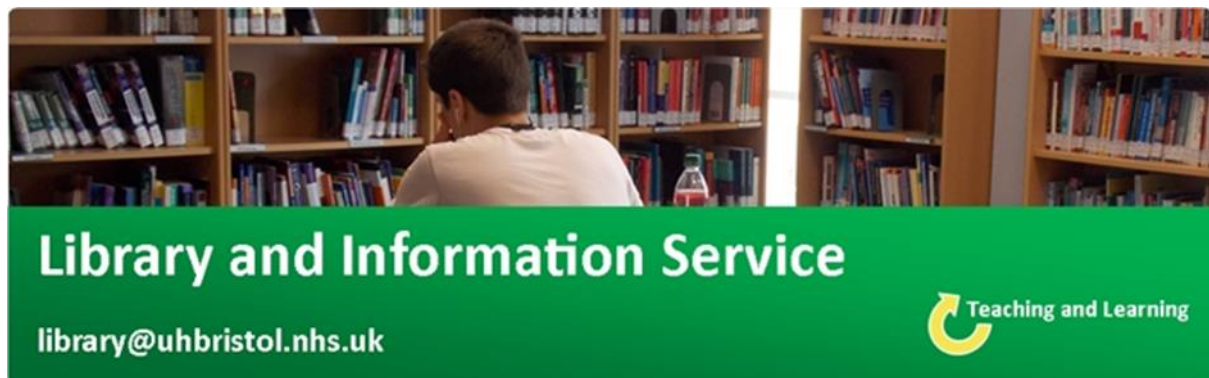
Setting and patients Febrile children attending a large tertiary care ED during the winter of 2014–2015.

Main outcome measures Ward and PAU admissions, National Institute for Health and Care Excellence (NICE) guidelines classification, reattendance to the ED within 28 days and antibiotic use.

Results 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.

Conclusions 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.



Library Opening Times

Staffed hours: 8am-5pm, Mon-Fri

Swipe-card access: 7am-11pm 7 days a week

Level 5, Education and Research Centre

University Hospitals Bristol

Contact your Outreach Librarian:

Helen Pullen