PICU
Current Awareness Newsletter
May 2015
**Outreach**

Your Outreach Librarian can help facilitate evidence-based practise for all PICU members of staff, 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.

**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.

**Critical Appraisal Training**

We also offer one-to-one or small group training in literature searching, accessing electronic journals, and critical appraisal/Statistics. These are essential courses that teach how to interpret clinical papers.

**Books**

Books can be searched for using SWIMS our online catalogue at [www.swims.nhs.uk](http://www.swims.nhs.uk). Books and journals that are not available on site or electronically may be requested from other locations. Please email requests to: thomas.osborne@uhbristol.nhs.uk
Contents

1: Tables of Contents from April’s Paediatric journals

2: New NICE Guidance

3: Latest relevant Systematic Reviews from the Cochrane Library.

4: NHS Behind the Headlines

5: New activity in Uptodate

6: Quick Exercise

7: Current Awareness database articles
Tables of Contents from Paediatric & Critical Care journals

If you require full articles please email me @ Thomas.Osborne@UHBristol.nhs.uk

Pediatrics 2015 Vol.135 Issue 4

- Are We on the Right Track? Examining the Role of Developmental Behavioral Pediatrics
  Full Text
- A Slice of Peace
  Full Text
- An Adoptive Parental Perspective on Personal Genomic Screening
  Full Text
- Assessing Sexual Symptoms and Side Effects in Adolescents
  Full Text
- Iodine and the “Near” Eradication of Cretinism
  Full Text
- Late Preterm Birth and Neurocognitive Performance in Late Adulthood: A Birth Cohort Study
  Full Text
- Executive Function in Adolescents Born <1000 g or <28 Weeks: A Prospective Cohort Study
  Full Text
- Gestational Age and Developmental Risk in Moderately and Late Preterm and Early Term Infants
  Full Text
- Trajectories and Outcomes Among Children With Special Health Care Needs
  Full Text
- Isolated Linear Skull Fractures in Children With Blunt Head Trauma
  Full Text
- Collaborative Care for Children With ADHD Symptoms: A Randomized Comparative Effectiveness Trial
  Full Text
- Continuous Positive Airway Pressure With Helmet Versus Mask in Infants With Bronchiolitis: An RCT
  Full Text
- 13-Valent Pneumococcal Conjugate Vaccine (PCV13) in Preterm Versus Term Infants
  Full Text
- Government Health Care Spending and Child Mortality
  Full Text
- Medical Providers’ Understanding of Sex Trafficking and Their Experience With At-Risk Patients
  Full Text
- Mortality After Burn Injury in Children: A 33-year Population-Based Study
  Full Text
- Antidepressant Use During Pregnancy and Asthma in the Offspring
  Full Text
- Vitamin B-12, Folic Acid, and Growth in 6- to 30-Month-Old Children: A Randomized Controlled Trial
  Full Text
- Comorbidity of Physical and Mental Disorders in the Neurodevelopmental Genomics Cohort Study
  Full Text
- Handheld Echocardiography Versus Auscultation for Detection of Rheumatic Heart Disease
  Full Text
- Cardiac Biomarkers and Acute Kidney Injury After Cardiac Surgery
  Full Text
- Sociodemographic Attributes and Spina Bifida Outcomes
  Full Text
Parent-Reported Outcomes of a Shared Decision-Making Portal in Asthma: A Practice-Based RCT
Full Text
Infectious and Autoantibody-Associated Encephalitis: Clinical Features and Long-term Outcome
Full Text
Diagnosis of Viral Infections Using Myxovirus Resistance Protein A (MxA)
Full Text
Safety and Efficacy of Pimecrolimus in Atopic Dermatitis: A 5-Year Randomized Trial
Full Text
Pneumonia in Childhood and Impaired Lung Function in Adults: A Longitudinal Study
Full Text
Antibiotic Exposure in Infancy and Risk of Being Overweight in the First 24 Months of Life
Full Text
Clinical Features of Celiac Disease: A Prospective Birth Cohort
Full Text
Etiology of Childhood Bacteremia and Timely Antibiotics Administration in the Emergency Department
Full Text
Off-Label Use of Inhaled Nitric Oxide After Release of NIH Consensus Statement
Full Text
Motivational Interviewing and Dietary Counseling for Obesity in Primary Care: An RCT
Full Text
Antipsychotic Medication Prescribing in Children Enrolled in Medicaid
Full Text
Physician Response to Parental Requests to Spread Out the Recommended Vaccine Schedule
Full Text
Retinal Microvasculature and Cardiovascular Health in Childhood
Full Text
Early Intervention for Toddlers With Language Delays: A Randomized Controlled Trial
Full Text
Pediatric Palliative Care and Inpatient Hospital Costs: A Longitudinal Cohort Study
Full Text
New Pediatricians: First Jobs and Future Workplace Goals
Full Text
Diversity and Inclusion Training in Pediatric Departments
Full Text
Lung Ultrasound for the Diagnosis of Pneumonia in Children: A Meta-analysis
Full Text
Screening and Routine Supplementation for Iron Deficiency Anemia: A Systematic Review
Full Text
Prevalence of Attention-Deficit/Hyperactivity Disorder: A Systematic Review and Meta-analysis
Full Text
Prediction Models for Neonatal Health Care–Associated Sepsis: A Meta-analysis
Full Text
Fatigue in Child Chronic Health Conditions: A Systematic Review of Assessment Instruments
Full Text
State-of-the-Art Office-Based Interventions to Eliminate Youth Tobacco Use: The Past Decade
Full Text
The 2014 Douglas K. Richardson Award for Perinatal and Pediatric Healthcare Research Address: Measuring Quality of Pediatric Care: Where We’ve Been and Where We’re Going
Full Text
Measles Imported to the United States by Children Adopted From China and Huiming Luo
Full Text
Another Step Towards Celiac Screening
Full Text
Inhaled Nitric Oxide for the Preterm Infant: Evidence Versus Practice
Full Text
Primary Care Interventions for Pediatric Obesity: Need for an Integrated Approach
Full Text
Therapeutic hypothermia for neonatal encephalopathy

What is new for patent ductus arteriosus management in premature infants in 2015?

Long-chain polyunsaturated fatty acids supplementation in preterm infants

Donor human milk for very low birth weights: patterns of usage, outcomes, and unanswered questions

Pulmonary hypertension in chronic lung disease of infancy

Clinical manifestations of autosomal recessive polycystic kidney disease

Autosomal dominant polycystic kidney disease in children

Nephronophthisis and related syndromes

The role of cilia in the pathogenesis of cystic kidney disease

MicroRNAs in the pathogenesis of cystic kidney disease

Recent progress in the genetics and epigenetics of paraoxonase: why it is relevant to children's environmental health

Developmental origins of health and disease: a paradigm for understanding disease cause and prevention

Impact of hospital-based environmental exposures on neurodevelopmental outcomes of preterm infants

Recommendations for management of large hemispheric infarction

Blood pressure management in acute intracerebral hemorrhage: current evidence and ongoing controversies

Why is diagnosing brain death so confusing?

Recommendations for the use of multimodal monitoring in the neurointensive care unit

Rationale for lumbar drains in aneurysmal subarachnoid hemorrhage

Reversal of the novel oral anticoagulants dabigatran, rivaroxaban, and apixaban

Update on acute liver failure

Diarrhoea in the critically ill
Acute, nonvariceal upper gastrointestinal bleeding

Liver transplantation in the context of organ shortage: toward extension and restriction of indications considering recent clinical data and ethical framework

Mesenteric ischemia

**Paediatric Critical Care Medicine**  **Volume 16**  **Issue 3**

- Fluid Overload at 48 Hours Is Associated With Respiratory Morbidity but Not Mortality in a General PICU: Retrospective Cohort Study*
- Current Medication Practice and Tracheal Intubation Safety Outcomes From a Prospective Multicenter Observational Cohort Study*
- Autologous Bone Marrow Mononuclear Cells Reduce Therapeutic Intensity for Severe Traumatic Brain Injury in Children*
- Prevalence of Dysglycemia and Association With Outcomes in Pediatric Extracorporeal Membrane Oxygenation*
- Hemorrhagic Complications in Pediatric Cardiac Patients on Extracorporeal Membrane Oxygenation: An Analysis of the Extracorporeal Life Support Organization Registry
- Pharmacologic Recipes for Tracheal Intubation in the PICU: What’s on the Menu?*
- Pediatric Critical Care Ultrasound Education: The Importance of a Common Denominator*
- Cell-Based Therapy for Pediatric Traumatic Brain Injury: Not (Yet) an Update to the Traumatic Brain Injury Guidelines*
- Critical Care for Rare Diseases (and Procedures): Redux*
- Outcomes and Risk Factors in Pediatric Ventilator-Associated Pneumonia: Guilt by Association*

**Pediatric Anesthesia**  **May Vol 25 Issue 5**

- News from the pediatric anesthesia societies (page 441)
- What is the condition of education in Pediatric Anesthesiology? (pages 445–446)
- Anesthesia and the developing brain: a way forward for clinical research (pages 447–452)
- The development of pediatric anesthesia and intensive care in Scandinavia (pages 453–459)
- Volatile anesthetics for status asthmaticus in pediatric patients: a comprehensive review and case series (pages 460–467)
- Dexmedetomidine vs midazolam as preanesthetic medication in children: a meta-analysis of randomized controlled trials (pages 468–476)
- A single-center strategy to minimize blood transfusion in neonates and children undergoing cardiac surgery (pages 477–486)
- Selection of subspecialty fellows in anesthesia for pediatric anesthesia: a national survey of program directors in the United States (pages 487–491)
Intranasal dexmedetomidine premedication reduces minimum alveolar concentration of sevoflurane for laryngeal mask airway insertion and emergence delirium in children: a prospective, randomized, double-blind, placebo-controlled trial (pages 492–498)

Dexmedetomidine-ketamine combination and caudal block for superficial lower abdominal and genital surgery in children (pages 499–505)

Dose effect of local anesthetics on analgesic outcomes for the transversus abdominis plane (TAP) block in children: a randomized, double-blinded, clinical trial (pages 506–510)

Should we abandon landmark-based technique for caudal anesthesia in neonates and infants? (pages 511–516)

Transition to propofol after sevoflurane anesthesia to prevent emergence agitation: a randomized controlled trial (pages 517–523)

Emergence delirium, pain or both? a challenge for clinicians (pages 524–529)

Effects of a restrictive fluid regimen in pediatric patients undergoing major abdominal surgery (pages 530–537)

Reply to Dr. Haydar regarding his comment: caudal clonidine and apnea risk (page 538)

Fluid resuscitation for toddlers and young children (pages 538–540)

Carbon monoxide has antinociceptive effects in rodent models of pain (pages 540–541)

New NICE Guidance


- Excess winter deaths and morbidity and the health risks associated with cold homes (NG6) March 2015

Latest relevant Systematic Reviews from the Cochrane Library

If you require full articles, or a more enhanced search of any of the below topics please email me @ Thomas.Osborne@UHBristol.nhs.uk
Psychological interventions for parents of children and adolescents with chronic illness
Christopher Eccleston, Emma Fisher, Emily Law, Jess Bartlett and Tonya M Palermo

Potentiators (specific therapies for class III and IV mutations) for cystic fibrosis
Sanjay Patel, Ian P Sinha, Kerry Dwan, Carlos Echevarria, Michael Schechter and Kevin W Southern

Pharmacological interventions for pain in children and adolescents with life-limiting conditions
Emma Beecham, Bridget Candy, Richard Howard, Renée McCulloch, Jo Laddie, Henrietta Rees, Victoria Vickerstaff, Myra Bluebond-Langner and Louise Jones

Paracetamol (acetaminophen) for patent ductus arteriosus in preterm or low-birth-weight infants
Arne Ohlsson and Prakeshkumar S Shah

Interventions for reducing medication errors in children in hospital
Jolanda M Maaskant, Hester Vermeulen, Bugewa Apampa, Bernard Fernando, Maisoon A Ghaleb, Antje Neubert, Sudhin Thayyil and Aung Soe

Pentoxifylline for treatment of sepsis and necrotizing enterocolitis in neonates
Mohan Pammi and Khalid N Haque
Online Publication Date: March 2015

NHS Behind the Headlines

Bullying may have worse long-term effects than child abuse

Wednesday Apr 29 2015

"Bullied children are five times more at risk of anxiety than those maltreated," reports the Daily Mail. A study looking at both UK and US children found an association between childhood bullying and anxiety, depression and self-harm in adulthood…

No evidence organic milk in pregnancy lowers a baby's IQ

Tuesday Apr 28 2015

"Pregnant women who switch to 'healthier' organic milk may be putting the brain development of their unborn babies at risk," The Guardian reports after researchers found

Parents 'may pass anxiety on to their children'

Monday Apr 27 2015
The Mail Online has given stressed-out parents one more thing to worry about, saying: "Anxiety is 'catching' and can be passed on to children", adding that, "Attitudes of over-anxious parents can severely affect children's behaviour"…

New asthma treatment within five years, researchers hope

"Asthma cure could be in reach," The Independent reports. Researchers have discovered that protein molecules called calcium-sensing receptors play a pivotal role in asthma. Drugs known to block these proteins already exist...

Paracetamol may blunt feelings of pleasure as well as pain

"Paracetamol may dull emotions as well as physical pain, new study shows'," The Guardian reports. The story comes from research testing whether over-the-counter painkiller paracetamol can blunt not just the feeling of pain but also emotions…

Concerns raised about increased e-cigarette use in teenagers

"E-cigarettes: Many teenagers trying them, survey concludes," BBC News reports after a survey of around 16,000 English teenagers found one in five teens had tried an e-cigarette…

Meningitis B jab to be added to NHS child vaccine schedule

"Britain will become the first country in the world to offer a nationwide vaccination programme against meningitis," The Independent reports. A vaccine against the potentially life-threatening bacterial infection will be provided later this year...

New activity in Uptodate

Valganciclovir for treatment of symptomatic congenital CMV infections (April 2015)

Congenital cytomegalovirus (CMV) infection is a leading cause of hearing loss in children and can cause other serious long-term neurodevelopmental disabilities. An earlier study found that in infants with congenital CMV involving the central nervous system (CNS), six weeks of ganciclovir was associated with improved audiologic outcomes. Subsequent studies found that valganciclovir (the orally available prodrug of ganciclovir) achieved similar clinical effectiveness. A recent multicenter randomized controlled trial compared six months with six weeks of valganciclovir therapy in infants with symptomatic congenital CMV (including infants without neurologic involvement) [7]. Infants who received six months of therapy had improved hearing and language development at 24 months compared with those who received six weeks of therapy. Based on these findings we now treat all infants with symptomatic congenital CMV infection (not just those with isolated CNS infection) with six months of antiviral therapy. (See "Congenital cytomegalovirus infection: Management and outcome", section on 'Whom to treat'.)
Diagnostic accuracy of serial ultrasounds for pediatric appendicitis (April 2015)

In patients whose initial ultrasound is equivocal for the diagnosis of appendicitis, repeat physical examination and a second ultrasound in patients who have persistent findings of appendicitis has good diagnostic accuracy and can markedly reduce the number of children undergoing computed tomography (CT). In a prospective observational study of 294 children undergoing acute evaluation for abdominal pain (38 percent with appendicitis), a pathway that utilized serial physical examination, surgical consultation, and repeat ultrasound for patients whose initial ultrasound was equivocal; discharge home for patients whose initial ultrasound showed a normal appendix; and surgical consultation for patients with initial ultrasounds that were positive for appendicitis achieved a sensitivity of 97 percent and a specificity of 91 percent [27]. CT was performed in four patients. (See "Acute appendicitis in children: Diagnostic imaging", section on 'Imaging approach'.)

Risk of intracranial injury in young children with isolated linear skull fractures (April 2015)

Linear skull fractures account for approximately 75 percent of all skull fractures in children, and hospitalization for this condition is frequently performed. In a prospective, multicenter observational study of 350 children (median age 10 months) with isolated linear skull fractures and no additional injury identified on initial computed tomography, no patient required neurosurgical intervention on follow-up ranging from 7 to 90 days (95% CI 0 to 1 percent), although 201 patients were hospitalized after initial evaluation [28]. These findings suggest that neurologically normal children with isolated linear fractures will not require hospitalization.

False positive Down syndrome screening tests (April 2015)

Noninvasive prenatal Down syndrome screening using cell free DNA results in lower false positive and false negative rates than conventional aneuploidy screening tests. In a recent study of Down syndrome screening in an unselected population including almost 16,000 women, the false positive rates of cell free DNA and conventional screening were 0.1 and 5 percent, respectively, and false negative rates were 0 and 21 percent, respectively [41]. False positive results can be due to factors such as maternal mosaicism, maternal tumors, maternal copy number variants, vanishing twins, confined placental mosaicism, or a failure of the complex bioinformatics necessary to generate a result [42-49]. Despite the low false positive rate with cell free DNA screening, confirmatory diagnostic testing (genetic amniocentesis or chorionic villus sampling) is mandatory after a screen positive result. (See "Noninvasive prenatal testing using cell-free nucleic acids in maternal blood", section on 'Trisomy 21, 18, 13'.)

Aerosolized measles vaccine inferior to subcutaneous vaccine with respect to seropositivity rate (April 2015)

Measles vaccine is usually given by subcutaneous injection; an aerosolized vaccine could be administered by individuals with less training and would not require sterile needles or syringes. In a study including 2004 infants aged 9.0 to 11.9 months in India randomized to receive measles vaccine either by aerosol inhalation or subcutaneous injection, aerosolized vaccine was found to be immunogenic but inferior to the subcutaneous vaccine with respect to seropositivity rate [51]. Follow-up was completed for 1560 children (775 children in the aerosolized vaccine group and 785 children in the subcutaneous vaccine group); seropositivity rates at day 91 were 85.4 and 94.6 percent,
respectively. Subcutaneous administration of the measles vaccine remains the standard of care. (See "Prevention and treatment of measles", section on 'Types of vaccines'.)

Measles outbreak in United States (April 2015, MODIFIED April 2015)

The United States has experienced a record number of measles cases during 2014 to 2015. In 2014, 644 cases were reported from 27 states [52]. Between January 1 and April 10, 2015, 159 cases have been reported. Most cases have occurred among individuals who were unvaccinated. Children living in or traveling to areas where there is a measles outbreak (defined as ≥3 cases linked in time and space) and children traveling outside the United States should receive measles-mumps-rubella vaccine earlier than it is routinely recommended. (See "Epidemiology and transmission of measles", section on 'United States' and "Standard immunizations for children and adolescents", section on 'Outbreaks and international travel'.)

Hypotonic versus isotonic parenteral maintenance fluids in hospitalized children (April 2015)

Previous systematic reviews have demonstrated that the use of parenteral hypotonic solution for maintenance fluid therapy in hospitalized children increased the risk of hyponatremia compared with isotonic solution. The largest clinical trial to date of 690 hospitalized children, which was subsequently published, reconfirmed that the administration of hypotonic (sodium concentration of 77 mEq/L) versus isotonic maintenance fluid (sodium concentration of 140 mEq/L) increased the risk of developing hyponatremia [65]. As a result, in hospitalized children requiring parenteral fluid therapy, we recommend that isotonic solution be used as maintenance therapy. (See "Maintenance fluid therapy in children", section on 'Hospitalized children'.)

Quick Exercise

See how many types of bias you recognise below! Answers on a postcard. The winner gets the self-satisfaction of telling everyone they’re Critical Appraisal geniuses!
Current Awareness Database Articles

If you require full articles, or a more enhanced search of any of the below topics please email me @ Thomas.Osborne@UHBrasil.nhs.uk

Title: Effect of a vascular access team on central line-associated bloodstream infections in infants admitted to a neonatal intensive care unit: A systematic review.

Citation: International Journal of Nursing Studies, May 2015, vol. 52, no. 5, p. 1003-1010, 0020-7489 (May

Author(s): Legemaat, Monique M., Jongerden, Irene P., van Rens, Roland M. F. P. T., Zielman, Marianne, van den Hoogen, Agnes

Abstract: Objective: To review the effect of a vascular access team on the incidence of central line-associated bloodstream infections in infants admitted to a neonatal intensive care unit. Data sources MEDLINE, CINAHL, Embase, Web-of-Science and the Cochrane Library were searched until December 2013. Study Selection Studies that evaluated the implementation of a vascular access team, and focused on the incidence of central line-associated bloodstream infections in infants admitted to a neonatal intensive care unit, were selected. Data Extraction Incidence rates of central line-associated bloodstream infections were extracted, as well as information on vascular access team tasks and team composition.
**Title:** Paediatric ventilation treatment of acute lung injury in Nordic intensive care units.

**Citation:** Acta anaesthesiologica Scandinavica, May 2015, vol. 59, no. 5, p. 568-575 (May 2015)

**Author(s):** Jensen, L L, Baratt-Due, A, Englund, P N, Harju, J A, Sigurðsson, T S, Liberg, J-P

**Abstract:** Treatment of acute respiratory distress syndrome (ARDS) in children is largely based on extrapolated knowledge obtained from adults and which varies between different hospitals. This study explores ventilation treatment strategies for children with ARDS in the Nordic countries, and compares these with international practice. In October 2012, a questionnaire covering ventilation treatment strategies for children aged 1 month to 6 years of age with ARDS was sent to 21 large Nordic intensive care units that treat children with ARDS. Pre-terms and children with congenital conditions were excluded. Eighteen of the 21 (86%) targeted intensive care units responded to the questionnaire. Fifty per cent of these facilities were paediatric intensive care units. Written guidelines existed in 44% of the units. Fifty per cent of the units frequently used cuffed endotracheal tubes.

**Title:** Pediatric patients who receive antibiotics for fever and neutropenia in less than 60 min have decreased intensive care needs.

**Citation:** Pediatric blood & cancer, May 2015, vol. 62, no. 5, p. 807-815 (May 2015)

**Author(s):** Salstrom, Jennifer L, Coughlin, Rebecca L, Pool, Kathleen, Bojan, Melissa, Mediavilla, Camille, Schwent, William, Rannie, Michael, Law, Dawn, Finnerty, Michelle, Hilden, Joanne

**Abstract:** Antibiotic delivery to patients with fever and neutropenia (F&N) in...
randomisation protocol to start with PPCBR or non-PPCBR and then crossed over to the other arm after a wash-out period. At the conclusion of each arm, parents completed the 'NICU Parental Stressor Scale' (a validated tool) and a satisfaction survey. After completion of the trial, we surveyed all healthcare providers who participated at least in one PPCBR rounding episode. We also offered all participating parents and healthcare providers the opportunity to partake in a focus group discussion regarding PPCBR. A total of 72 parents were enrolled in this study, with 63 parents (87%) partially or fully completing the trial. Of the parents who completed the trial, 95% agreed that parents should be allowed to attend clinical bedside rounds. A total of 39 healthcare providers' surveys were returned and 35 (90%) agreed that parents should be allowed to attend rounds.

Title: Erratum to: Study of Ventilator-Associated Pneumonia in a Pediatric Intensive Care Unit.

Citation: Indian journal of pediatrics, May 2015, vol. 82, no. 5, p. 492. (May 2015)

Author(s): Balasubramanian, Pooja, Tullu, Milind S

Title: A noninvasive hemoglobin monitor in the pediatric intensive care unit.

Citation: The Journal of surgical research, May 2015, vol. 195, no. 1, p. 257-262 (May 1, 2015)


Abstract: Critically ill pediatric patients frequently require hemoglobin monitoring. Accurate noninvasive Hb (SpHb) would allow practitioners to decrease anemia from repeated blood draws, traumatic blood draws, and a decreased number of laboratory Hb (LabHb) medical tests. The Food and Drug Administration has approved the Masimo Pronto SpHb and associated Rainbow probes; however, its use in the pediatric intensive care unit (PICU) is controversial. In this study, we define the degree of agreement between LabHb and SpHb using the Masimo Pronto SpHb Monitor and identify clinical and demographic conditions associated with decreased accuracy.

Title: Short-term renal support in postoperative repair of tetralogy of Fallot in the paediatric intensive care unit: can we predict those who need it?

Citation: Cardiology in the young, Apr 2015, vol. 25, no. 4, p. 760-764 (April 2015)


Abstract: Fluid balance and renal function can be difficult to manage in the postoperative infant with tetralogy of Fallot. High fluid volumes are often needed to maintain cardiac output. Aims To stratify patients at risk for advanced renal support following tetralogy of Fallot repair. Retrospective analysis of all consecutive tetralogy of Fallot cases operated at a single centre in a 3-year period. A total of 41 children were identified. All cases had loop diuretics administered. Of the cases, 17% required support with a peritoneal dialysis catheter, with only one complication of peritoneal dialysis catheter blockage. The mean length of paediatric intensive care unit stay in those receiving peritoneal dialysis catheter insertion was prolonged by an additional mean of 6 days (p

Title: Implementation of patient-centered bedside rounds in the pediatric intensive care unit.

Citation: Journal of nursing care quality, Apr 2015, vol. 30, no. 2, p. 160-166 (2015 Apr-Jun)

Author(s): Tripathi, Sandeep, Arteaga, Grace, Rohlik, Gina, Boynton, Bradley, Graner, Kevin, Ouellette, Yves

Abstract: Implementation of effective family-centered rounds in an intensive care unit environment is fraught with challenges. We describe the application of PDSA (Plan, Do, Study, Act) cycles in a quality improvement project to improve the process of rounds and increase family participation and provider satisfaction. We
conducted pre-/postintervention surveys and used 5 process measures for a total of 1296 daily patient rounds over 7 months. We were successful in conducting family-centered rounds for 90% of patients, with 40% family participation and a 64.6% satisfactory rating by pediatric intensive care unit providers.

**Title:** [Viral respiratory tract infections in the Neonatal Intensive Care Unit].

**Citation:** Anales de pediatría (Barcelona, Spain : 2003), Apr 2015, vol. 82, no. 4, p. 242-246 (April 2015)

**Author(s):** Gonzalez-Carrasco, E, Calvo, C, García-García, M L, Beato, M, Muñoz-Archipidona, C, Pozo, F, Casas, I

**Abstract:** Viral respiratory infections cause major morbidity and mortality in preterm infants. We have performed a prospective study in our neonatal intensive care unit (NICU) to determine the incidence of respiratory infections, their impact and the epidemiology and outcome in high risk neonates. From September 2011 to May 2013 a prospective study was conducted in all preterm infants

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**Title:** Family nurture intervention improves the quality of maternal caregiving in the neonatal intensive care unit: evidence from a randomized controlled trial.

**Citation:** Journal of developmental and behavioral pediatrics : JDBP, Apr 2015, vol. 36, no. 3, p. 188-196 (April 2015)

**Author(s):** Hane, Amie A, Myers, Michael M, Hofer, Myron A, Ludwig, Robert J, Halperin, Meeka S, Austin, Judy, Glickstein, Sara B, Welch, Martha G

**Abstract:** This study assessed the impact of Family Nurture Intervention (FNI) on the quality of maternal caregiving behavior (MCB) while in the neonatal intensive care unit (NICU). FNI is a randomized controlled trial conducted in a high-acuity NICU to facilitate an emotional connection between mothers and their premature infants. FNI begins shortly after birth, continues until discharge, and involves mother/infant calming sessions that include scent cloth exchange, vocal soothing and emotion expression, eye contact, skin-to-skin and clothed holding, and family-based support sessions. Maternal caregiving behavior was coded during a single holding and feeding session (∼30 min) in the NICU before discharge at approximately 36 weeks gestational age (GA). Sixty-five mothers and their premature infants (34 male, 31 female; 26-34 wk GA) were included in these analyses (FNI, n = 35; standard care [SC], n = 30). Relative to mothers in the SC condition, those in the FNI group showed significantly higher quality MCB, which remained significant when controlling for birth order, twin status, maternal depression, and maternal anxiety. This is the first study to demonstrate that in-unit MCB can be enhanced by a hospital-based intervention. FNI provides a new rationale for integrating nurture-based interventions into standard NICU care.

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**Title:** Attitudes of Pulmonary and Critical Care Training Program Directors toward Quality Improvement Education.

**Citation:** Annals of the American Thoracic Society, Apr 2015, vol. 12, no. 4, p. 587-590 (April 2015)

**Author(s):** Kahn, Jeremy M, Feemster, Laura C, Fruci, Carolyn M, Hyzy, Robert C, Savant, Adrienne P, Siner, Jonathan M, Weiss, Curtis H, Patel, Bela

**Abstract:** Quality improvement (QI) is a required component of fellowship training in pulmonary, critical care, and sleep medicine. However, little is known about how training programs approach QI education. We sought to understand the perceptions of pulmonary, critical care, and sleep medicine training program directors toward QI education. We developed and fielded an internet survey of pulmonary, critical care, and sleep medicine training program directors during 2013. Survey domains included program characteristics, the extent of trainee and faculty involvement in QI, attitudes toward QI education, and barriers to successful QI education in their programs. A total of 75 program directors completed the survey (response rate = 45.2%). Respondents represented both adult (n = 43, 57.3%) and pediatric (n = 32, 42.7%) programs. Although the majority of directors (n = 60, 80.0%) reported substantial fellow involvement in QI, only 19 (26.0%) reported having a
Title: Prognosis of neonatal tetanus in the modern management era: an observational study in 107 Vietnamese infants.

Citation: International journal of infectious diseases : IJID : official publication of the International Society for Infectious Diseases, Apr 2015, vol. 33, p. 7-11 (April 2015)

Author(s): Lam, Phung Khanh, Trieu, Huynh T, Lubis, Inke Nadia D, Loan, Huynh T, Thuy, Tran Thi Diem, Wills, Bridget, Parry, Christopher M, Day, Nicholas P J, Qui, Phan T, Yen, Lam Minh, Thwaites, C Louise

Abstract: Most data regarding the prognosis in neonatal tetanus originate from regions where limited resources have historically impeded management. It is not known whether recent improvements in critical care facilities in many low- and middle-income countries have affected indicators of a poor prognosis in neonatal tetanus. We aimed to determine the factors associated with worse outcomes in a Vietnamese hospital with neonatal intensive care facilities. Data were collected from 107 cases of neonatal tetanus. Clinical features on admission were analyzed against mortality and a combined endpoint of 'death or prolonged hospital stay'.

Title: Consensus statement on continuous EEG in critically ill adults and children, part I: indications.

Citation: Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society, Apr 2015, vol. 32, no. 2, p. 87-95 (April 2015)


Abstract: Critical Care Continuous EEG (CCEEG) is a common procedure to monitor brain function in patients with altered mental status in intensive care units. There is significant variability in patient populations undergoing CCEEG and in technical specifications for CCEEG performance. The Critical Care Continuous EEG Task Force of the American Clinical Neurophysiology Society developed expert consensus recommendations on the use of CCEEG in critically ill adults and children. The consensus panel recommends CCEEG for diagnosis of nonconvulsive seizures, nonconvulsive status epilepticus, and other paroxysmal events, and for assessment of the efficacy of therapy for seizures and status epilepticus.

Title: Diagnosing ventilator-associated pneumonia in pediatric intensive care.

Citation: American journal of infection control, Apr 2015, vol. 43, no. 4, p. 390-393 (April 1, 2015)

Author(s): Iosifidis, Elias, Stabouli, Stella, Tsolaki, Anastasia, Sigounas, Vaios, Panagiotidou, Emilia-Barbara, Sdougka, Maria, Rolides, Emmanuel

Abstract: The Centers for Disease Control and Prevention's criteria were applied by independent investigators for ventilator-associated pneumonia (VAP) diagnosis in critically ill children and compared with tracheal aspirate cultures (TACs). In addition, correlation between antibiotic use, VAP incidence, and epidemiology of TACs was investigated. A modest agreement (κ = 0.41) was found on radiologic findings between 2 investigators. VAP incidence was 7.7 episodes per 1,000 ventilator days, but positive TACs were the most significant factor for driving high antimicrobial usage in the pediatric intensive care unit. Copyright © 2015 Association for Professionals in Infection Control and Epidemiology, Inc. Published by Elsevier Inc. All rights reserved.

Title: The lived experience of fathers of preterm infants in the neonatal intensive care unit: A systematic review of qualitative studies.

Citation: Journal of Clinical Nursing, Apr 2015, (Apr 7, 2015), 0962-1067 (Apr 7, 2015)
Author(s): Provenzi, Livio, Santoro, Elena

Abstract: Aims and objectives To systematically review the experience of fathers of preterm infants hospitalised in the Neonatal Intensive Care Unit. Background Family-centred care is more and more acknowledged in Neonatal Intensive Care Units, advocating for active engagement of both parents in the care journey. Nonetheless, fathers’ Neonatal Intensive Care Unit experience has received limited research attention. Design Systematic review of qualitative studies. Methods Four electronic databases (CINHAL, ISI Web of Science, PubMed, Scopus) were explored and studies published between 2000–2014 were included. Preferred Reporting Item for Systematic Reviews and Meta-analysis (PRISMA) and Joanna Briggs Institute (JBI) Critical Appraisal Tool for Qualitative Studies guidelines were adopted. Key themes were extracted and synthesised. Results Five main themes resuming fathers’ experience of preterm birth and Neonatal Intensive Care Unit stay were identified from 14 studies. Themes were: emotional roller-coaster, paternal needs, coping strategies, self-representation and caregiving engagement.

Title: Clinical profiles and outcomes of children admitted to the pediatric intensive care unit from the emergency department.

Citation: Journal of the College of Physicians and Surgeons--Pakistan : JCPSP, Apr 2015, vol. 25, no. 4, p. 301-303 (April 2015)

Author(s): Haque, Anwarul, Siddiqui, Naveedur Rehman, Jafri, Sidra Kaleem, Hoda, Mehar, Bano, Surraiya, Mian, Asad

Abstract: The aim of this study was to describe clinical profiles and outcomes of children admitted directly from the Emergency Room (ER) to the Pediatric Intensive Care Unit (PICU) of academic hospital. The medical records of all children (1 month to 16 years) admitted in PICU from ER, from January 2011 to December 2012 were reviewed. Of the 26,774 patients seen in the ER during the study period, 468 (1.7%) were admitted to the PICU which constituted about 41.5% (468/1127) of all the total PICU admissions. Sixty three percent (n=294) were under-five; males were 60.9% (285), 82.3% (385) were in medical category. Neurological and respiratory illnesses were the most common groups (> 50% of all ER admissions). Multi-organ dysfunction syndrome and co-morbidity were present in 25.2% (n=118) and 23.5% (n=110) respectively. The mean length of stay was 5 ± 3.7 hours.

Title: Variability of intensive care management for children with bronchiolitis.

Citation: Hospital pediatrics, Apr 2015, vol. 5, no. 4, p. 175-184, 2154-1663 (April 2015)

Author(s): Pierce, Heather C, Mansbach, Jonathan M, Fisher, Erin S, Macias, Charles G, Pate, Brian M, Piedra, Pedro A, Sullivan, Ashley F, Espinola, Janice A, Camargo, Carlos A

Abstract: To determine the extent of variability in testing and treatment of children with bronchiolitis requiring intensive care. This prospective, multicenter observational study included 16 academic children’s hospitals across the United States during the 2007 to 2010 fall and winter seasons. The study included children


Citation: Intensive care medicine, Apr 2015, vol. 41, no. 4, p. 575-588 (April 2015)

Author(s): Timsit, Jean-François, Perner, Anders, Bakker, Jan, Bassetti, Matteo, Benoit, Dominique, Cecconi, Maurizio, Curtis, J Randall, Doig, Gordon S, Herridge, Margaret, Jaber, Samir, Ioannidis, Michael, Papazian, Laurent, Peters, Mark J, Singer, Pierre, Smith, Martin, Soares, Marcio, Torres, Antoni, Vieillard-Baron, Antoine, Citerio, Giuseppe, Azoulay, Elie

Source: Medline
Title: [The use of therapeutic play in the intensive care of a preschool child with virus-associated hemophagocytic syndrome].

Citation: Hu li za zhi The journal of nursing, Apr 2015, vol. 62, no. 2, p. 96-102, 0047-262X (April 2015)

Author(s): Hsu, Chia-Hua, Feng, Jui-Ying

Abstract: Hospitalization is a stressful experience for children that increases their anxiety and fears, generates resistance and noncompliance, and, as a result, delays necessary treatments. Developing an age-appropriate intervention to reduce the hospitalization-related stress perceived by children is an important component of pediatric nursing. This case study used therapeutic play and drawing to care for a virus-associated hemophagocytic syndrome preschooler who stayed in our pediatric intensive care unit (PICU) between 11/13/2012 and 11/19/2012. Stressors faced by the patient included separation from primary caregiver, unfamiliarity with the medical environment and equipment, non-comprehension of the treatment and medication regimens, and loss of control. The patient displayed incorporative behaviors such as crying, screaming, refusing to be touched, and requesting parental accompaniment. Painting and picture books were used as developmentally appropriate interventions to understand the patient's feelings and to provide a means for him to project and release emotions. This strategy successfully assisted the child to overcome the perceived stress of hospitalization and to cooperate with healthcare providers on his treatment.

Title: Consensus Statement on Continuous EEG in Critically Ill Adults and Children, Part II: Personnel, Technical Specifications, and Clinical Practice.

Citation: Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society, Apr 2015, vol. 32, no. 2, p. 96-108 (April 2015)


Abstract: Critical Care Continuous EEG (CCEEG) is a common procedure to monitor brain function in patients with altered mental status in intensive care units. There is significant variability in patient populations undergoing CCEEG and in technical specifications for CCEEG performance. The Critical Care Continuous EEG Task Force of the American Clinical Neurophysiology Society developed expert consensus recommendations on the use of CCEEG in critically ill adults and children. The consensus panel describes the qualifications and responsibilities of CCEEG personnel including neurodiagnostic technologists and interpreting physicians. The panel outlines required equipment for CCEEG, including electrodes, EEG machine and amplifier specifications, equipment for polygraphic data acquisition, EEG and video review machines, central monitoring equipment, and network, remote access, and data storage equipment. The consensus panel also describes how CCEEG should be acquired, reviewed and interpreted. The panel suggests methods for patient selection and triage; initiation of CCEEG; daily maintenance of CCEEG; electrode removal and infection control; quantitative EEG techniques; EEG and behavioral monitoring by non-physician personnel; review, interpretation, and reports; and data storage protocols. Recommended qualifications for CCEEG personnel and CCEEG technical specifications will facilitate standardization of this emerging technology.

Title: [Winter viral ecology in a pediatric intensive care unit: A prospective study].

Citation: Archives de pédiatrie : organe officiel de la Société française de pédiatrie, Apr 2015, vol. 22, no. 4, p. 368-372 (April 2015)

Author(s): Mortamet, G, Morello, R, Jokic, M, Vabret, A, Leroux, M, Brouard, J, Dina, J

Abstract: Viral respiratory infections are common in children, most of which are due to a virus. They can lead to serious infections, and these children may require treatment in a pediatric intensive care unit (PICU). This prospective study evaluated the epidemiology of respiratory viruses and associated illnesses among children
hospitalized in a PICU during the three winter months of 2012-2013. All the children admitted to the PICU, University Hospital of Caen, France, were included. Nasal swabs were collected and specimens were tested using a single real-time PCR (polymerase chain reaction). Of the 105 patients admitted to the PICU during the study period, 84 fulfilled the inclusion criteria. The "respiratory group" included 37 patients with respiratory symptoms at admission while the "nonrespiratory group" included 47 patients with no respiratory symptoms. The 84 nasal swabs collected included 54 that were considered positive (64.3%) and 70 viruses were detected. The most commonly detected virus was RSV (n=28; 40.0% positive samples), followed by HRV (n=24; 34.3%). Viruses were more frequently detected in the respiratory (86.5%) than in the nonrespiratory (42.6%) group (P

Title: Satisfaction with care and decision making among parents/caregivers in the pediatric intensive care unit: a comparison between English-speaking whites and Latinos.

Citation: Journal of critical care, Apr 2015, vol. 30, no. 2, p. 236-241 (April 2015)

Author(s): Epstein, David, Unger, Jennifer B, Ornelas, Beatriz, Chang, Jennifer C, Markowitz, Barry P, Dodek, Peter M, Heyland, Daren K, Gold, Jeffrey I

Abstract: Because of previously documented health care disparities, we hypothesized that English-speaking Latino parents/caregivers would be less satisfied with care and decision making than English-speaking non-Latino white (NLW) parents/caregivers. An intensive care unit (ICU) family satisfaction survey, Family Satisfaction in the Intensive Care Unit Survey (pediatric, 24 question version), was completed by English-speaking parents/caregivers of children in a cardiothoracic ICU at a university-affiliated children's hospital in 2011. English-speaking NLW and Latino parents/caregivers of patients, younger than 18 years, admitted to the ICU were approached to participate on hospital day 3 or 4 if they were at the bedside for greater than or equal to 2 days. Analysis of variance, χ², and Student t tests were used. Cronbach αs were calculated. Fifty parents/caregivers completed the survey in each group.

Title: The effect of chronotype on sleepiness, fatigue, and psychomotor vigilance of ICU nurses during the night shift.

Citation: Intensive care medicine, Apr 2015, vol. 41, no. 4, p. 657-666 (April 2015)

Author(s): Reinke, Laurens, Özbay, Yusuf, Dieperink, Willem, Tulleken, Jaap E

Abstract: In general, sleeping and activity patterns vary between individuals. This attribute, known as chronotype, may affect night shift performance. In the intensive care unit (ICU), night shift performance may impact patient safety. We have investigated the effect of chronotype and social demographics on sleepiness, fatigue, and night shift on the performance of nurses. This was a prospective observational cohort study which assessed the performance of 96 ICU night shift nurses during the day and night shifts in a mixed medical-surgical ICU in the Netherlands. We determined chronotype and assessed sleeping behaviour for each nurse prior to starting shift work and before free days. The level of sleepiness and fatigue of nurses during the day and night shifts was determined, as was the effect of these conditions on psychomotor vigilance and mathematical problem-solving. The majority of ICU nurses had a preference for early activity (morning chronotype). Compared to their counterparts (i.e. evening chronotypes), they were more likely to nap before commencing night shifts and more likely to have young children living at home.

Title: Paediatric nurses’ postoperative pain management practices in hospital based non-critical care settings: A narrative review.

Citation: International Journal of Nursing Studies, Apr 2015, vol. 52, no. 4, p. 836-863, 0020-7489 (Apr 2015)

Author(s): Twycross, Alison, Forgeron, Paula, Williams, Anna

Abstract: Objectives: To investigate paediatric nurses’ postoperative pain management practices with the aim of identifying the factors associated with undermanaged paediatric postoperative pain. Design: Systematic search and review. Data sources: PsychInfo, CINAHL, PubMed, EMBASE and hand searching. Review methods: English peer-reviewed quantitative, qualitative, or mixed methods research articles published between
1990 and 2012 exploring registered nurses’ paediatric postoperative pain management practices were included. Articles with a primary focus on nurses’ pain management practices in the neonatal or paediatric intensive care units, recovery room, and/or focused on children with cognitive impairment were excluded. The search terms used were: postoperative pain; nurs*; paediatrics; pediatrics; children; pain assessment; non-pharm*; analges*.

Titles and abstracts were used for initial screening. Two researchers conducted data extraction and assessment of rigour for each paper. Results: From the initial 248 citations, 27 studies were included. Most studies were descriptive and examined relationships between personal factors and nurses’ pain management practices. Observational data from four papers added insights beyond that provided in self-report studies. Two articles used experimental designs with vignettes. Data were categorised into four topics: pain assessment; pharmacological practices; non-pharmacological practices; and factors affecting practices. Despite improvements in analgesic administration over the past 20 years, practices remain suboptimal. Children’s behaviour appears to influence nurses’ pain assessment more than validated measures. A significant proportion of children did not have pain scores recorded in the first 24-h postoperatively. Children receive more analgesia when ordered around the clock compared to as required. However, around the clock analgesia prescription did not guarantee administration. Nurses reported using several non-pharmacological strategies routinely but some are not evidence based. Conclusions:

Title: A descriptive study of nurse-reported missed care in neonatal intensive care units

Citation: Journal of Advanced Nursing, Apr 2015, vol. 71, no. 4, p. 813-824, 0309-2402 (April 2015)

Author(s): Tubbs-Cooley, Heather L., Pickler, Rita H., Younger, Janet B., Mark, Barbara A.

Abstract: Aims. The aims of this study are to describe: (1) the frequency of nurse-reported missed care in neonatal intensive care units; and (2) nurses’ reports of factors contributing to missed care on their last shift worked. Background. Missed nursing care, or necessary care that is not delivered, is increasingly cited as a contributor to adverse patient outcomes. Previous studies highlight the frequency of missed nursing care in adult settings; the occurrence of missed nursing care in neonatal intensive care units is unknown. Design. A descriptive analysis of neonatal nurses’ self-reports of missed care using data collected through a cross-sectional web-based survey. Methods. A random sample of certified neonatal intensive care nurses in seven states was invited to participate in the survey in April 2012.

Title: Advance Care Planning in palliative care: A qualitative investigation into the perspective of Paediatric Intensive Care Unit staff

Citation: Palliative Medicine, Apr 2015, vol. 29, no. 4, p. 371-379, 0269-2163 (April 2015)

Author(s): Mitchell, Sarah, Dale, Jeremy

Abstract: Background: The majority of children and young people who die in the United Kingdom have pre-existing life-limiting illness. Currently, most such deaths occur in hospital, most frequently within the intensive care environment. Aim: To explore the experiences of senior medical and nursing staff regarding the challenges associated with Advance Care Planning in relation to children and young people with life-limiting illnesses in the Paediatric Intensive Care Unit environment and opportunities for improvement. Design: Qualitative one-to-one, semi-structured interviews were conducted with Paediatric Intensive Care Unit consultants and senior nurses, to gain rich, contextual data. Thematic content analysis was carried out. Setting/participants: UK tertiary referral centre Paediatric Intensive Care Unit. Eight Paediatric Intensive Care Unit consultants and six senior nurses participated.

Title: What impact did a Paediatric Early Warning system have on emergency admissions to the paediatric intensive care unit? An observational cohort study.

Citation: Intensive & critical care nursing: the official journal of the British Association of Critical Care Nurses, Apr 2015, vol. 31, no. 2, p. 91-99 (April 2015)

Author(s): Sefton, G, McGrath, C, Tume, L, Lane, S, Lisboa, P J G, Carrol, E D
Abstract: The ideology underpinning Paediatric Early Warning systems (PEWs) is that earlier recognition of deteriorating in-patients would improve clinical outcomes. To explore how the introduction of PEWs at a tertiary children's hospital affects emergency admissions to the Paediatric Intensive Care Unit (PICU) and the impact on service delivery. To compare 'in-house' emergency admissions to PICU with 'external' admissions transferred from District General Hospitals (without PEWs). A before-and-after observational study August 2005-July 2006 (pre), August 2006-July 2007 (post) implementation of PEWs at the tertiary children's hospital. The median Paediatric Index of Mortality (PIM2) reduced; 0.44 vs 0.60 (p

Title: Continuing to challenge practice to be evidence based.

Citation: Critical care nurse, Apr 2015, vol. 35, no. 2, p. 39-50 (April 2015)

Author(s): Makic, Mary Beth Flynn, Rauen, Carol, Jones, Kimmith, Fisk, Anna C

Abstract: Practice habits continue in clinical practice despite the availability of research and other forms of evidence that should be used to guide critical care practice interventions. This article is based on a presentation at the 2014 National Teaching Institute of the American Association of Critical-Care Nurses. The article is part of a series of articles that challenge critical care nurses to examine the evidence guiding nursing practice interventions. Four common practice interventions are reviewed: (1) weight-based medication administration, (2) chest tube patency maintenance, (3) daily interruption of sedation, and (4) use of chest physiotherapy in children. For weight-based administration of medication, the patient's actual weight should be measured, rather than using an estimate. The therapeutic effectiveness and dosages of medications used in obese patients must be critically evaluated. Maintaining patency of chest tubes does not require stripping and milking, which probably do more harm than good. Daily interruption of sedation and judicious use of sedatives are appropriate in most patients receiving mechanical ventilation. Traditional chest physiotherapy does not help children with pneumonia, bronchiolitis, or asthma and does not prevent atelectasis after extubation. Critical care nurses are challenged to evaluate their individual practice and to adopt current evidence-based practice interventions into their daily practice.

Title: The prevalence and diagnostic utility of systemic inflammatory response syndrome vital signs in a pediatric emergency department.

Citation: Academic emergency medicine : official journal of the Society for Academic Emergency Medicine, Apr 2015, vol. 22, no. 4, p. 381-389 (April 2015)

Author(s): Scott, Halden F, Deakyne, Sara J, Woods, Jason M, Bajaj, Lalit

Abstract: This study sought to determine the prevalence, test characteristics, and severity of illness of pediatric patients with systemic inflammatory response syndrome (SIRS) vital signs among pediatric emergency department (ED) visits. This was a retrospective descriptive cohort study of all visits to the ED of a tertiary academic free-standing pediatric hospital over 1 year. Visits were included if the patient was 38.5°C, and 6,122 (15.2% of included visits) met SIRS vital sign criteria. Among included visits, those with SIRS vital signs accounted for 92.8% of all visits with fever >38.5°C. Among patients with SIRS vital signs, 4993 (81.6%) were discharged from the ED without intravenous (IV) therapy and without 72-hour readmission. Critical care within the first 24 hours was present in 99 (0.25%) patients: 23 patients with and 76 without SIRS vital signs.

Title: Use of cisatracurium in critical care: a review of the literature.

Citation: Minerva anestesiologica, Apr 2015, vol. 81, no. 4, p. 450-460 (April 2015)

Author(s): Szakmany, T, Woodhouse, T

Abstract: Cisatracurium is currently one of the most commonly used neuromuscular blocking agent (N MBA) in intensive care units. Cisatracurium was developed primarily for anaesthetic purposes in order to attempt to resolve some of the problems associated with earlier NMBAs, such as histamine release and laudanosine accumulation. Cisatracurium, the the R-cis-R-cis isomer of atracurium, is up to 5 times more potent than
Atracurium and so is administered in smaller quantities and produces a lesser degree of laudanosine accumulation in the plasma. In both adult and paediatric settings cisatracurium has favourable pharmacological characteristics compared to vecuronium, a steroid based NMBA often used in critical care. Recent randomised clinical trials suggested that the use of cisatracurium is associated with better outcome in acute respiratory distress syndrome (ARDS). Its use has been associated with better outcomes in therapeutic hypothermia and in traumatic brain injury. Although it has many favorable pharmacological properties, it is more expensive than comparable agents and some safety concerns persist regarding adverse events associated with the drug. The aim of the present study was to perform the first comprehensive review to date of all literature relating to the use of cisatracurium in critically ill patients.

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**Title:** Paediatric nurses' postoperative pain management practices in hospital based non-critical care settings: a narrative review.

**Citation:** International journal of nursing studies, Apr 2015, vol. 52, no. 4, p. 836-863 (April 2015)

**Author(s):** Twycross, Alison, Forgeron, Paula, Williams, Anna

**Abstract:** To investigate paediatric nurses' postoperative pain management practices with the aim of identifying the factors associated with undermanaged paediatric postoperative pain. Systematic search and review. PsychInfo, CINAHL, PubMed, EMBASE and hand searching. English peer-reviewed quantitative, qualitative, or mixed methods research articles published between 1990 and 2012 exploring registered nurses' paediatric postoperative pain management practices were included. Articles with a primary focus on nurses' pain management practices in the neonatal or paediatric intensive care units, recovery room, and/or focused on children with cognitive impairment were excluded. The search terms used were: postoperative pain; nurs*; paediatrics; pediatrics; children; pain assessment; non-pharm*; analges*.

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**Title:** Surgical suite to pediatric intensive care unit handover protocol: implementation process and long-term sustainability.

**Citation:** Journal of nursing care quality, Apr 2015, vol. 30, no. 2, p. 113-120 (2015 Apr-Jun)

**Author(s):** Northway, Tracie, Krahn, Gordon, Thibault, Kristine, Yarske, Lisa, Yuskiv, Nataliya, Kissoon, Niranjan, Collet, Jean-Paul

**Abstract:** The article reports the long-term sustainability of a standardized transfer protocol from cardiac surgical suite to the pediatric intensive care unit. Using rapid process improvement technique, the original mean defect rate per handover decreased from 13.2 to 0 and 0.3, 12, and 24 months postimplementation, respectively. This study stresses the importance of long-term assessment to control for possible observation biases; it also illustrates a successful implementation strategy that used video recording to engage staff in identifying solutions to the observed defects.

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**Title:** A population-based analysis of children with pneumonia among intensive care units in Taiwan.

**Citation:** Journal of microbiology, immunology, and infection = Wei mian yu gan ran za zhi, Apr 2015, vol. 48, no. 2, p. 153-159 (April 2015)

**Author(s):** Hsu, Chien-Lun, Lee, Yu-Sheng, Chen, Chun-Jen, Lee, Ming-Luen, Yang, Chia-Feng, Soong, Wen-Jue, Jeng, Mei-Jy, Wu, Keh-Gong

**Abstract:** Pneumonia is a major diagnosis in children that requires intensive care and is a major cause of mortality in critically ill children. A survey on current epidemiology and case fatality-associated conditions is crucial for the care of critically ill children with pneumonia in an intensive care unit (ICU). The sex, age, seasonality of admission, area of distribution, and case fatality rate of children younger than 18 years who had pneumonia and were admitted to an ICU during the period 2006-2010 were obtained from the National Health Insurance Research Database (NHIRD) of Taiwan.
Title: Pediatric intensive care unit mortality among latino children before and after a multilevel health care delivery intervention.

Citation: JAMA pediatrics, Apr 2015, vol. 169, no. 4, p. 383-390 (April 1, 2015)

Author(s): Anand, Kanwaljeet J S, Sepanski, Robert J, Giles, Kimberley, Shah, Samir H, Juarez, Paul D

Abstract: Research on health equity has focused on documenting health care disparities or understanding factors leading to disparities, but limited efforts have focused on reducing health care disparities in children. Latino children have increased prevalence of acute and chronic conditions; they have limited access and other barriers to high-quality health care, including intensive care. To determine whether pediatric intensive care unit mortality can be reduced by a multilevel health care delivery intervention.
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