Neonatal Evidence Update
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NICE Guidance

Sepsis: recognition, diagnosis and early management. NICE guidelines [NG51] Published date: July 2016
Overview: This guideline covers the recognition, diagnosis and early management of sepsis for all populations. The guideline committee identified that the key issues to be included were: recognition and early assessment, diagnostic and prognostic value of blood markers for sepsis, initial treatment, escalating care, identifying the source of infection, early monitoring, information and support for patients and carers, and training and education. Click to view

Other Guidance

Electronic Compendium Medicine
Revised SPC: Mycamine (micafungin) 50mg and 100mg powder for solution for infusion
Comment: The SPC has been updated with an amendment of dosing section (4.2) to introduce a separate dosing table for children (including neonates) <4 months. Click to view

Public Health England
Newborn blood spot screening: revised standards published for consultation
These programme standards aim to support health professionals and commissioners deliver a high quality Newborn blood spot screening service. The consultation period closes 26 September 2016. Click to view

New and Updated Cochrane Systematic Reviews (Click on topics to view)

Synchronized mechanical ventilation for respiratory support in newborn infants
Conclusions
Anne Greenough, Thomas E Rossor, Adesh Sundaresan, Vadivelam Murthy, Anthony D Milner
Online Publication Date: September 2016

Responsive versus scheduled feeding for preterm infants New
Julie Watson, William McGuire. Online Publication Date: August 2016

Cup feeding versus other forms of supplemental enteral feeding for newborn infants unable to fully breastfeed New
Anndrea Flint, Karen New, Mark W Davies. Online Publication Date: August 2016
Instruments for assessing readiness to commence suck feeds in preterm infants: effects on time to establish full oral feeding and duration of hospitalisation New
Linda Crowe, Anne Chang, Karen Wallace. Online Publication Date: August 2016

Kangaroo mother care to reduce morbidity and mortality in low birthweight infants New
Agustin Conde-Agudelo, José L Díaz-Rossello. Online Publication Date: August 2016

Vitamin A supplementation to prevent mortality and short- and long-term morbidity in very low birth weight infants New
Brian A Darlow, P J Graham, Maria Ximena Rojas-Reyes. Online Publication Date: August 2016

Synchronized mechanical ventilation for respiratory support in newborn infants Conclusions
Anne Greenough, Vadivelam Murthy, Anthony D Milner, Thomas E Rossor, Adesh Sundaresan
Online Publication Date: August 2016.

Endothelin receptor antagonists for persistent pulmonary hypertension in term and late preterm infants New

Cycled light in the intensive care unit for preterm and low birth weight infants New
Iris Morag, Arne Ohlsson. Online Publication Date: August 2016

Sucrose for analgesia in newborn infants undergoing painful procedures New
Bonnie Stevens, Janet Yamada, Arne Ohlsson, Sarah Halliburton, Allyson Shorkey
Online Publication Date: July 2016

Cochrane Clinical Answers have been developed by Cochrane Innovations Ltd. and Wiley OnlineLibrary. Access: via Wiley Online Library or via http://cochraneclinicalanswers.com/

This Month’s Clinical Questions

Is there randomized controlled trial evidence to support the use of chlorhexidine skin or cord care in the community for preventing mortality and infections in neonates? Click to view answer

How do topical emollients compare with routine skin care for preventing infection in preterm infants? Click to view answer

What are the effects of oral immunoglobulin in preterm and low birth weight neonates? Click to view answer
**Practice Changing Research**

**Title:** Nurses' and Parents' Perceptions of Parental Guidance on Using Nonpharmacological Pain-Relieving Methods Among Neonates in the NICU.

**Citation:** Pain Manag Nurs. 2016 Aug;17(4):272-80. Epub 2016 Jun 8.

**Author(s):** Pölkki T, Laukkala H, Korhonen A.

**Conclusions:** When counseling parents to use nonpharmacological methods, neonatal nurses should actively interact with families and discuss parents' individual needs. [Click to view]

**Title:** Fetal cardiology: changing the definition of critical heart disease in the newborn.


**Author(s):** Slodki, M et.al

**Conclusions:** More work needs to be done to better delineate the risk factors for progression of critical CHD and to determine which newborns will require specialized care. The most frequently described forms of critical CHD requiring immediate intervention include hypoplastic left heart syndrome with intact or severely restricted atrial septum, obstructed total anomalous pulmonary venous return and transposition of the great arteries with restrictive atrial septum. [Click to view]

**Title:** Strategies implementation to reduce medicine preparation error rate in neonatal intensive care units.

**Citation:** European journal of pediatrics, Jun 2016, vol. 175, no. 6, p. 755-765, 1432-1076 (June 2016)

**Author(s):** Campino, Ainara, et.al

**Conclusions:** Calculation errors can disappear with good standardisation protocols. Decrease in accuracy error depends on good preparation technique and environmental factors.

**What is known:** Medication use is associated with a risk of errors and adverse events. Medication errors are more frequent and have more severe consequences in paediatric patients. • Lack of commercial drug formulations adapted to newborn infants makes medicine preparation process more prone to error. What is New: • Calculation errors are minimising using concentration standard protocols. Preparation rules are essential to ensure the accuracy process. • Environmental conditions affect the accuracy process. [Click to view]

**Title:** High glucose intake and glycaemic level in critically ill neonates with inherited metabolic disorders of intoxication.

**Citation:** European journal of pediatrics, Jun 2016, vol. 175, no. 6, p. 849-858, 1432-1076 (June 2016)

**Author(s):** Grimaud, Marion, et.al

**Conclusions:** Hyperglycaemia is common in critically ill neonates receiving high glucose intake with inherited metabolic disorders of intoxication. Physicians should decrease the rate of total glucose intake and begin enteral feeding as quickly as possible in cases of persistent hyperglycaemia.

**What is known:** The risk of hyperglycaemia in the acute phase of critical illness is high. What is New: • Hyperglycaemia is common in the initial management of critically ill neonates with inherited metabolic disorders of intoxication receiving high glucose intake [Click to view]

**Title:** Clinical recommendations for pain, sedation, withdrawal and delirium assessment in critically ill infants and children: an ESPNIC position statement for healthcare professionals.

**Citation:** Intensive care medicine, Jun 2016, vol. 42, no. 6, p. 972-986, 1432-1238 (June 2016)

**Author(s):** Harris, Julia, et.al

**Conclusions:** This multidisciplinary ESPNIC position statement guides professionals in the assessment and reassessment of the effectiveness of treatment interventions for pain, distress, inadequate sedation, withdrawal syndrome and delirium. [Click to view]
Title: Part C early intervention utilization in preterm infants: Opportunity for referral from a NICU follow-up clinic.
Author(s): Greene, Michelle, Patra, Kousiki
Conclusions: NICU follow-up clinics facilitate appropriate CFC/EI services for preterm infants. Click to view

Title: Differences Between Transcutaneous and Serum Bilirubin Measurements in Black African Neonates
Citation: Pediatrics (August 2016)
Author(s): Olusanya, B.O et.al
Conclusions: BiliChek and JM-103 bilirubinometers significantly overestimate TSB in black African neonates and may result in unnecessary or excessive treatments. Additional development of appropriate bilirubin determination devices for this racial group, especially in resource-limited settings, is warranted. Click to view

Title: Applying Judgment Analysis Theory and Methods to Obtain an Insight Into Clinical Judgments: Implementation and Findings With a Simulated Neonatal Intensive Care Unit Setup.
Citation: Simulation in healthcare : journal of the Society for Simulation in Healthcare, Jun 2016, vol. 11, no. 3, p. 200-208, 1559-713X (June 2016)
Author(s): Nadler, Izhak, Globus, Omer, Pessach-Gelblum, Liat, Strauss, Zipora, Sela, Rina, Ziv, Amitai
Conclusions: Judgment analysis can promote health care by enhancing clinical assessment teaching, by providing objective and personalized feedback to team members about their judgment performance, and by introducing a unified and objective method to study elements that affect clinical judgments. Click to view

Title: Outbreak of multidrug-resistant Escherichia coli sequence type 131 in a neonatal intensive care unit: efficient active surveillance prevented fatal outcome.
Citation: The Journal of hospital infection, Jun 2016, vol. 93, no. 2, p. 181-186, 1532-2939 (June 2016)
Author(s): Silwedel, C, Vogel, U, Claus, H, Glaser, K, Speer, C P, Wirbelauer, J
Conclusions: Routine surveillance allowed early detection of the outbreak. The identification of carriers of the outbreak strain was successfully used to direct antibiotic treatment in case of infection. Enhanced hygienic measures and ward relocation were instrumental in controlling the outbreak. Click to view

Title: An evaluation of intra-hospital transport outcomes from tertiary neonatal intensive care unit.
Citation: The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians, Jun 2016, vol. 29, no. 12, p. 1993-1998, 1476-4954 (June 2016)
Author(s): Bastug, Osman, et.al
Conclusions: Current weight is useful for assessing the risks of untoward outcomes associated with intra-hospital transport. Protecting patients from hypothermia during the time spent outside of the NICU would reduce the risk of complications. Click to view
**Nurse Education**

**Title:** Who Takes Care of Us?: Understanding and Managing Secondary Traumatic Stress in the NICU  
**Author:** Lassen, S  
**Summary:** Working in a NICU brings all those involved into regular contact with trauma. The emerging field of STS is beginning to help us increase understanding of the impact of this trauma on NICU staff and, importantly, what health providers can do to minimize its effect on us. It is important health professionals normalize this aspect of their work in NICUs and act together to create a supportive environment where staff well-being is valued and seen as a critical aspect of the care they provide to infants and their families.  
[Click to view](#)

**Title:** High-fidelity simulation effect on nurses' identification of deteriorating pediatric patients  
**Citation:** Clinical Simulation in Nursing, Jun 2016, vol. 12, no. 6, p. 228-239, 1876-1399 (June 2016)  
**Author(s):** Martin, Melanie G., Keller, Leah A., Long, Terri L., Ryan-Wenger, Nancy A.  
**Conclusions:** Although simulations did not affect these outcomes, this is the first study to link pediatric high-fidelity simulation experiences to individual nurses' clinical decision-making practices and patient outcomes.  
[Click to view](#)

**Title:** What Registered Nurses Do and Do Not in the Management of Pediatric Peripheral Venous Catheters and Guidelines: Unpacking the Outcomes of Computer Reminders.  
**Citation:** Worldviews on evidence-based nursing / Sigma Theta Tau International, Honor Society of Nursing, Jun 2016, vol. 13, no. 3, p. 207-215, 1741-6787 (June 2016)  
**Author(s):** Eldh, Ann Catrine, Tollne, AnnaMaria, Förberg, Ulrika, Wallin, Lars  
**Abstract:** Attention given to the computer reminders varied; the RNs noticed them in units where there was an agreement about the management and recording of PVCs, but not elsewhere. Rather, computer reminders did not facilitate adherence to the PVC-CPG where the CPG was not acknowledged from the start. RNs who knew how to manage PVCs had peer support and received additional reminders, which suggested that the computer reminders added to the significance of PVCs in pediatric care. While the computer reminders alone did not support CPG implementation, they further increased the attention to PVCs in contexts where there was a readiness to change along with a supportive culture. We suggest further studies tailoring implementation strategies to include electronic means if there is a beneficial context.  
[Click to view](#)

**Title:** 'Knowing the Places of Care': How Nurses Facilitate Transition of Children with Complex Health Care Needs from Hospital to Home  
**Citation:** Issues in Comprehensive Pediatric Nursing, Jun 2016, vol. 39, no. 2, p. 139-153, 0146-0862 (June 1, 2016)  
**Author(s):** Carter, Bernie, et.al  
**Abstract:** Findings reflect the ways in which the nurses facilitated transition of children with complex needs from hospital to home and the journeys the nurses took to develop the skills, knowledge, and networks needed to support this transition. 'Knowing the places of care' was fundamental to the success of the nurses' work. As the nurses' knowledge of the places (and processes) of care deepened, they were better able to act as informed guides to families and other professionals and to improve care. The nurses' practice was driven by the belief that the place where care occurs matters. Home was seen as a transformative and sustaining place where caring practices could become incorporated into an environment in which the family could exist and be nurtured together.  
[Click to view](#)
Title: Improving and validating children's nurses communication skills with standardized patients in end of life care.
Citation: Journal of child health care : for professionals working with children in the hospital and community, Jun 2016, vol. 20, no. 2, p. 145-152, 1741-2889 (June 2016)
Author(s): Kenny, Gerard, Cargil, Jamie, Hamilton, Catherine, Sales, Rachel
Abstract: Children's nurse education is experiencing increases in recruitment targets at the same time that clinical placements are decreasing. With regard to end-of-life care, it is has become a challenge to ensure that all students come into contact with a satisfactory range of experience as part of the requirement for competency at the point of registration. The aim of our study was to find out if students at the end of their course were able to use communication skills acquired in their three years of training and adapt and transfer them to a specific palliative care context even if they had never worked in that area of care. Focus groups were conducted after the simulations which explored the students' experiences of being involved in the scenarios. Four themes emerged that students identified either inhibited or enabled their communication skills, which included anxiety and fear, the need for professional props, the experience of it being real and feeling empowered.

Title: Working With Children in Families With Parental Substance Abuse: Nurses' Experiences and Complexity in Relationships.
Citation: Journal of psychosocial nursing and mental health services, Jun 2016, vol. 54, no. 6, p. 38-44, 0279-3695 (June 1, 2016) Author(s): Wallström, Rebecca, et.al
Conclusions: Nurses' preventive work and intervention in dysfunctional families may have direct consequences on children's present and future development and well-being. [Journal of Psychosocial Nursing and Mental Health Services, 54(6), 38-44.]. Copyright 2016, SLACK Incorporated.

Title: Storyboarding as an aid to learning about death in children's nursing.
Citation: Nursing children and young people, Jun 2016, vol. 28, no. 5, p. 16-21, 2046-2344 (June 8, 2016) Author(s): Dexter, Yvonne
Abstract: This article examines the use of storyboarding as a creative teaching tool to enable children's nursing students to reflect on their experiences of working with children and families in death situations. The wider implications for the use of this technique in practice and education are considered.

Title: Where Is the Nursing?: Baccalaureate Nursing Students' Perceptions of Non-traditional Child Health Clinical Placements.
Citation: The Journal of nursing education, Jun 2016, vol. 55, no. 6, p. 349-352, 1938-2421 (June 1, 2016)
Author(s): Studnicka, Katie, O'Brien, Karen
Abstract: This qualitative study using focus groups explored the pre- and postperceptions of nursing students in nontraditional clinical placements. The overarching theme was Where Is the Nursing? This theme was underpinned by subthemes of the value of the placement and role (expectations and self-identification as a nurse). Participants were able to identify key aspects of nursing (e.g., communication, building relationships), but many of the students did not view these as nursing skills. In addition, some participants had difficulty identifying their roles as nurses. [J Nurs Educ. 2016;55(6):349-352.]. Click to view
Neonatology Point of Care Information summaries Updates (Athens required when offsite)

**Bronchopulmonary dysplasia**
Updated 2016 Aug 24 05:10:00 PM
- less invasive surfactant administration (LISA) protocol associated with reduced risk of BPD and intraventricular hemorrhage at postmenstrual age 36 weeks compared to mechanical ventilation in very preterm infants (JAMA 2016 Aug 9) view update

**Intrauterine growth restriction (IUGR)**
Updated 2016 Sep 09 01:52:00 PM
- in infants born at 24-34 weeks gestation, preterm birth due to suspected fetal growth restriction associated with increased in-hospital mortality compared to preterm birth due to preterm labor (Obstet Gynecol 2016 Jan) view update
- low abdominal circumference growth velocity found on ultrasound screening for small for gestational age in third trimester may help determine risk of neonatal morbidity in nulliparous women with singleton pregnancies (Lancet 2015 Nov 21) view update
- tape measurement of symphysis fundal height and clinical palpation associated with similar detection rates of small-for-gestational age fetus (Cochrane Database Syst Rev 2015 Sep 8) view update

What’s New in Neonatology (Click on title to view)
None in this issue

Online Journals
[http://www.porthosp.nhs.uk/Library/e-resources.htm/](http://www.porthosp.nhs.uk/Library/e-resources.htm/)
Athens password required.

- Advances in Neonatal Care [Click to view](#)
- Archives of Disease in Childhood - Fetal and Neonatal Edition [Click to view](#)
- Infant & Infant Grapevine [Click to view](#)
- Journal of Maternal-Fetal & Neonatal Medicine [Click to view](#)
- Journal of Obstetric Gynecologic and Neonatal Medicine [Click to view](#)
- Neonatology Today [Click to View](#)
- Neonatal Network [Click to view](#)
- Journal of Neonatal Nursing [Click to view](#)
**Keeping to Up to Date**

**BestBets** [www.bestbets.org](http://www.bestbets.org)


**British Association of General Paediatrics**- [www.bagp.org.uk](http://www.bagp.org.uk)

**Cochrane Child Health Evidence** - [http://childhealth.cochrane.org/cochrane-reviews-child-health](http://childhealth.cochrane.org/cochrane-reviews-child-health)

**Royal College of Paediatrics and Child Health** [www.rcpch.ac.uk](http://www.rcpch.ac.uk)

**The Royal Marsden Manual of Clinical Procedures** - [Click for access (NHS Athens Required)](http://childhealth.cochrane.org/cochrane-reviews-child-health)


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**Children/Neonatal in the news – media stories**

**Backwash from nursing babies may trigger infection fighters, study says.** Friday May 27 2016
"Baby’s saliva may creep back into mom’s nipple, where it may spur an immune response, some scientists think”. [Click to view](http://www.cdc.gov/zika)

**Pediatrics Group Issues Warning About 'Virtual Violence' and Children.** ABC News July 2016
Pediatricians should ask parents about their child's "media diet" in order to limit exposure to "virtual violence," according to the American Academy of Pediatrics. (ABC News). [Click to view](http://www.cdc.gov/zika)

**NICU at Md. hospital closed after discovery of potentially fatal bacteria.** 9 August 2016.
Washington Post. The neonatal intensive care unit at Prince George’s Hospital Center in Cheverly, Md., was temporarily shut down after the discovery of potentially deadly bacteria in the water pipes near the NICU, according to an article on The Washington Post [Click to view](http://www.cdc.gov/zika)

**Sudden infant death advice 'being ignored' due to flat head worries.** Wednesday 10 August 2016
"Parents are risking their babies' lives by putting expensive pillows in their cots to stop the back of their heads being flattened," the Daily Mail reports. A review of parental attitudes found some were ignoring advice [Click to view](http://www.cdc.gov/zika)

**Could a hearing test help diagnose autism in babies?** Monday 25 Jul 2016
"A hearing test is being hailed as a revolutionary technique to spot autism years earlier than current methods can," the Mail Online reports. The test is based on measuring how the inner ear reacts to sound... [Click to view](http://www.cdc.gov/zika)
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