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**The content:** current policy documents and the latest summarised evidence so that you will not be inundated with primary research articles.

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# Lyme disease: guidance (NG95)

This guideline covers diagnosing and managing Lyme disease. It aims to raise awareness of when Lyme disease should be suspected and ensure that people have prompt and consistent diagnosis and treatment. It does not cover preventing Lyme disease.

## OTHER GUIDANCE/REPORTS

**BRIGHTON AND SUSSEX UNIVERSITY HOSPITALS NHS TRUST**

**Sepsis: 60 minutes to save a life**

**Summary:** This guide outlines the 6 factors that have been shown to improve outcomes for patients and should be completed within the first hour following recognition of sepsis. [Click to view](#).

**Guidelines for the Provision of Paediatric Anaesthesia Services 2018 [PDF]**

Source: Royal College of Anaesthetists - 13 March 2018. [Click to view](#).

**PUBLIC HEALTH ENGLAND - 01 April 2018**

**Hepatitis B**

This can be prevented by immunisation of the newborn baby. [Click to view](#).

**ACADEMY OF MEDICAL ROYAL COLLEGES**

**Entering information into an e-portfolio**

**Summary:** In October 2016, the Academy worked alongside the Royal College of Paediatrics and Child Health, to produce guidance for doctors in training about entering information into an e-portfolio. It has been agreed that the Academy will work with the General Medical Council, the Academy Trainee Doctors Group, the BMA’s Junior Doctors Committee and the Conference of Post-Graduate Medical Deans (COPMeD) to revise reflective practice guidance. As the production of this will take some time, the objective of this paper is to set out the 10 key principles of reflective practice, in advance, for doctors in training to use. [Click to view](#).

## Clinical Questions of the Month

**How does volume-targeted ventilation compare with traditional pressure-limited ventilation for neonates?** [Click to view answer](#).

**How do anti-vascular endothelial growth factor (VEGF) drugs compare with conventional laser therapy for treatment of infants with retinopathy of prematurity?** [Click to view answer](#).

**CASE CHALLENGE - NICU**

Specialty Scenarios- Team STEEPS 2.0
**Scenario:** A premature infant is scheduled for surgery to have his bilateral hernias repaired. Surgery is scheduled for 0700, and he is placed NPO after 0330. An IV is placed and prophylactic antibiotics are given, but no fluids are started. Surgery states they will start the fluids in the OR. Unfortunately, the surgery is delayed because the surgical team is involved with an emergency trauma case. At 0930, the nurse caring for the infant realizes that the infant is still NPO and on no IVF. D-stick is 30. The NICU team is notified; the infant is given a D10W bolus and then started on IVF.  

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

- **Paracetamol (acetaminophen) for patent ductus arteriosus in preterm or low birth weight infants**  
  Online Publication Date: April 2018. Conclusions changed

- **Lower versus higher oxygen concentrations titrated to target oxygen saturations during resuscitation of preterm infants at birth.** Online Publication Date: May 2018

- **Immunoglobulin for alloimmune hemolytic disease in neonates**  
  Online Publication Date: March 2018

- **Provision of respiratory support compared to no respiratory support before cord clamping for preterm infants**  
  Online Publication Date: March 2018

- **Antibiotics at the time of removal of central venous catheter to reduce morbidity and mortality in newborn infants**  
  Online Publication Date: March 2018

- **Higher versus lower amino acid intake in parenteral nutrition for newborn infants**  
  Online Publication Date: March 2018

- **Beta-blockers for prevention and treatment of retinopathy of prematurity in preterm infants**  
  Online Publication Date: March 2018

- **Pulse oximetry screening for critical congenital heart defects**  
  Online Publication Date: March 2018

**SYSTEMATIC REVIEWS FROM OTHER SOURCES**

- **Title:** Immunogenicity and safety of the multicomponent meningococcal B vaccine (4CMenB) in children and adolescents: a systematic review and meta-analysis.  
  **Citation:** Flacco, Maria Elena et al. The Lancet Infectious Diseases, Volume 0, Issue 0.  
  **Summary:** 4CMenB has an acceptable short-term safety profile. The primary course is sufficient to achieve a satisfactory immune response within 30 days of vaccination. A booster dose is required for children to prolong the protection against strain M10713, and the long-term immunogenicity against strain NZ98/254 remains suboptimal.  
  Click to view

- **Title:** Association between race/skin color and premature birth: a systematic review with meta-analysis  
  **Source:** Revista De Saude Publica  
  **Conclusion:** The present meta-analysis indicated a positive association for the risk of prematurity according to race/skin color.  
  Click to view

- **Title:** Neonatal Abstinence Syndrome: Advances in Diagnosis and Treatment  
  **Source:** Journal of the American Medical Association
**Summary:** Review of 53 studies found that evidence for the optimal diagnosis and treatment for neonatal abstinence syndrome is based on small or low-quality studies focussing on intermediate outcomes, e.g. need for drug treatment. Trials are needed to evaluate neurodevelopmental outcomes. [Click to view](#)

**Title:** Association of antenatal steroid and risk of retinopathy of prematurity: a systematic review and meta-analysis. 

**Source:** The British Journal Of Ophthalmology

**Conclusion:** Antenatal steroid administration is associated with a reduced risk of ROP development and progression to severe ROP. Our results strengthened the indications of antenatal steroid therapy to high-risk mothers giving preterm births, especially in low-income and middle-income countries where antenatal steroid are not yet widely used. [Click to view](#)

**Primary Research**

**Title:** Large differences in neonatal drug use between NICUs are common practice: time for consensus?.

**Citation:** BJCP, 2018 April

**Authors’ conclusion:** We showed that drug use varies widely in neonatal clinical practice. The drug classes with the highest proportion of off-label drugs in relation to neonatal age showed the largest differences between NICUs, i.e. cardiovascular and nervous system drugs. Drug research in neonates should receive high priority to guarantee safe and appropriate medicines and optimal treatment. [Click to view](#)

**Neonatal intensive care unit phthalate exposure and preterm infant neurobehavioral**

**Source:** PLOS Published: March 5, 2018 https://doi.org/10.1371/journal.pone.0193835

**Conclusions:** In this first phase of a prospective cohort study of the neurodevelopmental impact of NICU-based phthalate exposure on very low birth weight infants, specific mixtures of phthalate biomarkers were associated with improved attention and social response on the NICU Network Neurobehavioral Scale. The long-term impact of this association between phthalate exposure and neurobehavior needs to be evaluated as our preterm cohort ages. [Click to view](#)

**Title:** Early Inhaled Budesonide for Bronchopulmonary Dysplasia: A Note of Caution

**Source:** N Engl J Med 2018 Jan 11

**Summary:** Administering steroids beginning in the first 24 hours of life may increase mortality in extremely preterm infants. 

**Comment:** The increased mortality observed at corrected ages of 18 to 22 months in the budesonide group largely reflects the previously reported mortality difference prior to hospital discharge. Smaller trials of early inhaled steroids have not suggested an increase in mortality in preterm infants, and the causes of mortality in the current trial did not differ between groups or appear to be attributable to respiratory infections. Still, these results should insert a note of caution regarding early use of inhaled steroids for extremely preterm infants. [Click to review](#)

**Title:** Standardizing Care Leads to Better Neonatal Jaundice Outcomes

**Source:** Pediatrics 2018 Feb 21.

**Summary:** Implementation of an evidence-based clinical pathway at one hospital led to multiple improvements in the care of jaundiced newborns.

**Comment:** This project is another example of how best available evidence can be linked successfully to specific hospital processes to achieve improved care. Although this neonatal jaundice pathway is specific to one hospital, other institutions can borrow and build on this work, taking advantage of the investment and achievements already made. [Click to review](#)

**Title:** Large differences in neonatal drug use between NICUs are common practice: time for consensus?

**Source:** British Journal of Clinical Pharmacology

**Authors’ Conclusions:** We showed that drug use varies widely in neonatal clinical practice. The drug classes with the highest proportion of off-label drugs in relation to neonatal age showed the largest differences between NICUs, i.e. cardiovascular and nervous system drugs. Drug research in neonates should receive high priority to guarantee safe and appropriate medicines and optimal treatment. [Click to view](#)

**Title:** Effect of Atropine With Propofol vs Atropine With Atracurium and Sufentanil on Oxygen Desaturation in Neonates Requiring Nonemergency Intubation: A Randomized Clinical Trial

**Source:** Journal of the American Medical Association

**Summary:** RCT (n= 173) reports frequency of prolonged desaturation did not differ significantly between atropine used with propofol or atropine used with atracurium and sufentanil. However, it may have been underpowered to detect a difference. [Click to view](#)
Topic: Noninvasive positive pressure ventilation (NPPV) in infants and children, Bronchiolitis
High-flow warm humidified oxygen therapy may have lower rates of escalation of care than standard oxygen therapy in infants < 12 months old with bronchiolitis and hypoxemia (N Engl J Med 2018 Mar 22)

Inhaled nitric oxide does not improve mortality in very preterm infants with respiratory distress syndrome (March 2018)
It has been proposed that inhaled nitric oxide (iNO) may be beneficial in very preterm (VPT) infants with hypoxic respiratory failure and persistent pulmonary hypertension (PPHN) who are unresponsive to surfactant therapy and conventional respiratory care. However, in a retrospective case control study of preterm infants born at 22 to 29 weeks of gestation who required mechanical ventilation for treatment of respiratory distress syndrome, mortality was similar in those who received and did not receive iNO, whether or not they had been diagnosed with PPHN [17]. We continue to recommend not using iNO for VPT infants as it remains an unproven and expensive intervention. (See "Persistent pulmonary hypertension of the newborn", section on 'Preterm infants'.)

Drug Prescriptions in NICUs Vary Widely
Prescriptions for at-risk newborns vary widely between neonatal intensive care units (NICUs) in the Netherlands, particularly for off-label cardiovascular and nervous system use, a study shows - and the findings are likely relevant to the U.S. and other countries. Click to view

Neonatal Caffeine Therapy for Apnea of Prematurity Has Long-term Benefits . Reuters Health
Neonatal caffeine therapy for apnea of prematurity is associated with improved visuomotor, visuoperceptual and visuospatial abilities in adolescence, according to follow-up data from the Caffeine for Apnea of Prematurity (CAP) trial. Click to view

High-Flow Oxygen Therapy Improves Outcomes in Infant Bronchiolitis
(Reuters Health) - High-flow oxygen therapy given by nasal cannula to infants with bronchiolitis - a treatment that adds heat, humidity and extra pressure to the oxygen - can cut odds of treatment failure by nearly half compared to standard-flow therapy, according to a new pragmatic study in Australia. Click to view

Phthalate Exposure in NICUs Tied to Altered Neurobehavioral Performance in Neonates
NEW YORK (Reuters Health) - Exposure to phthalates in neonatal intensive care units (NICUs) is associated with alterations in attention and social response that could lead to neurobehavioral problems in childhood, researchers in New York City suggest. Click to view

COstatus monitors could offer way to directly measure cardiac output among neonates
Clinicians caring for vulnerable babies in the neonatal intensive care unit need to closely monitor their vital signs, but precisely gauging the function of their tiny hearts has remained elusive. Click to view

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