Neonatal Respiratory Physiotherapy

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Respiratory Physiotherapy?

• ..........Not just percussion!

• Assessment of baby’s respiratory status and deciding what are the presenting problems

• How to address the issues
  – Treatment options
  – Respiratory management current and ongoing

• Part of the MDT

• The wider picture
  – Developing the service
  – Advancing practice
Neonatal Toolkit 2009

- “All units caring for babies requiring intensive care and providing a chest clearance service have access to a paediatric respiratory physiotherapist with experience in assessing and treating premature and sick newborn babies”
- “Access to education and training is available to enable members of the MDT to be trained to the level of competence necessary to enable the delivery of high quality care”

Bliss Baby Charter 2009

- Staff adopt a multidisciplinary approach to care that draws on generalist and specialist neonatal health professionals”
- Criteria: “Timely access to allied health professionals”
National Institute for Health and Clinical Excellence 2010

• Quality Standards Topic:
  – Specialist Neonatal Care
    • Quality Statement 3

  “Specialist services have a sufficient, skilled and competent multidisciplinary workforce”

  Evidence of local arrangements to provide a multidisciplinary service trained and competent in the care of neonates that has access to:

  **Specialised neonatal physiotherapists**
  (Dieticians, OTS, SALTs)
Developmental Care

Cues
Previous practice

• Variable reputation

• Routine
  – With cares - frequent
  – Masks
  – No guidance regarding examination/clinical reasoning/practical skills
  – Indications v contraindications
  – Staff had not received recent raining
  – No chance to ‘step back’ and review/develop practice
  – ANNP dissertation
Percussion

- **Indications:**
  - Secretion issues:
    - Secretion tenacity
    - Acute collapse due to mucous plugging
    - Pneumonia
    - Aspiration
  - Increases expiratory flow and mucociliary transport

- **Contra-indications**
  - Prolonged clotting platelet levels <50
  - Recent IVH
  - Pulmonary haemorrhage
  - Fractures/severe osteopenia
  - Severe instability < 26/40 within first week of life

**Cautions**
- Skin integrity
- Platelets 50-100

Head supported
Cotside teaching

- Clinical picture
- Examination
  - Developmental care
- Clinical reasoning
- Treating the baby together
  - Auscultation/positioning/suction/percussion
- Supervising, encouraging & suggestions
- Post intervention examination
- Advice
- Agreed treatment plan
- Records/liaison
Positioning
Secretion clearance

• Strategies?

• Support through treatment?
Suction

**Hazards:**
- Hypoxaemia
- Atelectasis
- Bradycardias
- Trauma
- Cardiovascular disturbance

**Good technique:**
- Mully tip catheters
- Controlled pressures
- Care with depth of suction
- Pre-oxygenation/manual breaths
- Saline – as indicated
- Good developmental care support
- Closed suction for oscillated babies/nitric
Extubated babies

Chronic lung disease

Neurological problems
Surgical babies - PICU

• Full Physio cover
• Post op - thick secretions –segmental/lobar lung collapse
• Potential instability and unpredictability
  – Desaturations
  – Bradycardia
• Distended abdomen – static position and problems with turning
• New stomas/wounds/drains
• Sepsis – coagulopathic \( \rightarrow \) restrictions using percussion
• Reduced intubation rates for infants after the introduction of high flow nasal prong oxygen delivery.  
  A. Schliber et al Intensive Care Med 2011  
  – In the subgroup viral bronchilolitis, rate of intubation was reduced to 7% compared to 37%  

• Humidified high flow nasal cannulae: Current practice.  
  Australasian nurseries; a survey J L Hough et al 2011  
  – Widely used – Optiflow over Vapotherm  
  – 4-6 litres, not >6l in infants <1 kg  
  – Comfort & tolerance  
  – Problems – rainout,, nasal prong fixation & occlusion of flow  
  – Concerns re evidence, actual CPAP levels produced with higher flows, guidelines – use & weaning
What's the evidence?
Education/promotion of role

• NNUs
  – Talks
  – Scenario based
  – Skills drills
• University courses
• Physiotherapy study days/out of hours training
• Considering new formats – DVD/interactive
• National projects
• Conferences and national courses
• Professional development
Dis muss be 1 of dem hairless kittehz

I keepz him warm.

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www.newbornnetworks.org.uk/southern