Maintaining Competence in Paediatric Anaesthetic & Recovery Room Nursing

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Objectives

- What is competence
- Anaesthetic & recovery competencies
- Caring for the child
- Paediatric Emergencies
- Maintaining Competence
- Our Supports

What is competence

- Competence is ‘ the ability to do something successfully or efficiently’ Oxford Dictionary
  *https://www.**oxforddictionaries**.com/*
- ‘Each nurse and midwife is responsible for their level of competency, and must take measures to develop and maintain the competence necessary for professional practice. The nurse or midwife must acknowledge any shortfall of competence’

http://www.nmbi.ie/Standards-Guidance/Scope-of-Practice/Principles-For-DeterminingScope#sthash.hmP2tHQE.dpuf

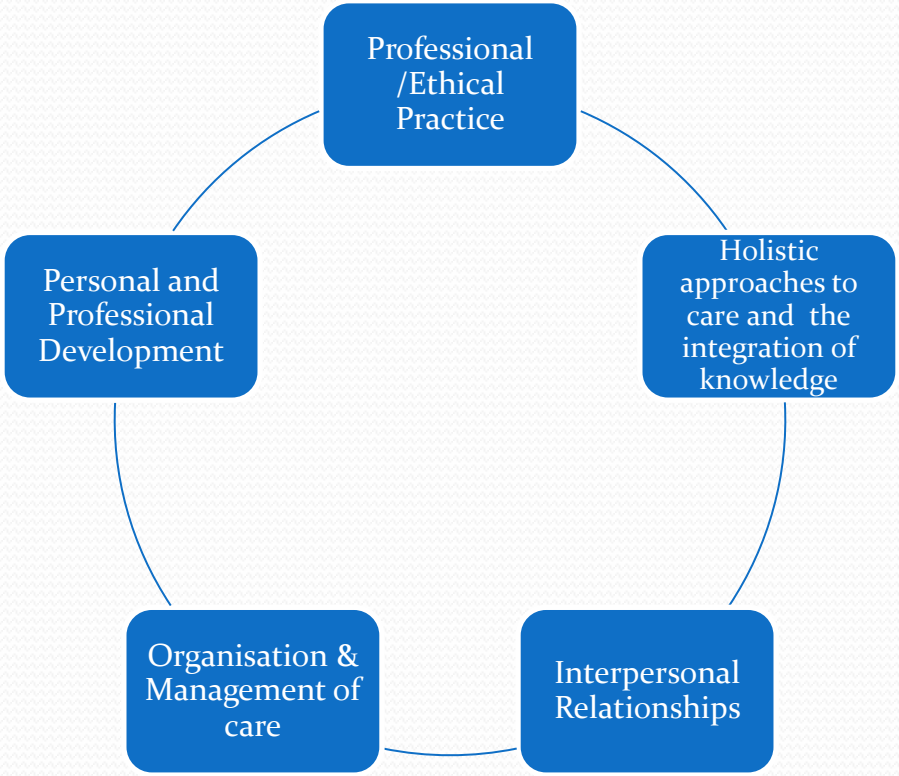
Why ?

- ‘Patients have a right to receive quality care by competent nurses and midwives who practise in a safe environment’

See more at: http://www.nmbi.ie/Standards-Guidance/Code/Quality-of-Practice#sthash.L71ktdG9.dpuf

Anaesthetic & Recovery Competencies

- 5 Domains



Competencies in anaesthetics and recovery nursing

- Preparation of environment
- Checking in the Patient into theatre
- Safe Site Surgery
- Psychological care
- Providing holistic care
- Family centred care
- Monitoring
- Airway management
- Pain management
- Circulation assessment
- Renal
- Neuromuscular
- Thermoregulation
- Pharmacology
- PEWS

We are not little adults we are children

- Anatomical
- Physiology
- Airways
- Lung capacity
- Cardiac output
- Metabolic rate

Anatomical Differences in Children

- **Airway**
- Obligatory nose breathers <6 months
- Tongue - large in mandible <2 years
- Head - large relative to body
- Protruding occiput
- Epiglottis large and Floppy in infants
- Larynx high and anterior
- Shorter more anterior trachea
- Floor of the mouth is easily compressible
- Cricoid narrowest part of airway <8 years
- Respiratory tract short and soft allowing easy compression, migration of tube

Anatomical & Physiological Differences in Children

Breathing

- Alveoli, still developing in numbers up to 8 years =less surface area
- Both upper & lower Airways are relatively small

  ->easy obstruction
- Thorax ribs horizontal position placing dependence on diaphragm & abdomen for breathing
- Fewer Type 1 fibres – tire easily

Anatomical & Physiological Differences in Children

Circulation

- Childs circulation volume 70-80mls/Kg is higher then that of an adult, but the actual volume is small

- Infants have a high HR to compensate for small stroke volume with a high metabolic rate and Oxygen requirement

Airway Obstruction

- Children have little o20 reserve
- It is imperative to intervene fast
- **OPEN AIRWAY & GIVE OXYGEN** is the first line of treatment calling for **HELP – EMERGENCY BELL**

Structured Approach

- A – Airway
- B - Breathing
- C – Circulation

- Concentrating on Airway Management & Complications

Goals of Airway management

- Promotion of adequate gas exchange
- Recognition and relief of anatomic obstruction
- Prevention of aspiration of gastric contents

Assessment of breathing

- Look => the abdomen should be moving freely
- Listen => Noisy Breathing is obstructed breathing
- Feel => The abdomen is moving easily

Assessing Respiratory Function

Effort of Breathing

- Respiratory rate
- Recession
- Accessory muscle use

Paradoxical chest movements - chest collapses inwards on inspiration, abdomen protrudes outwardly.

When exaggerated, the sternum 'cups' inward

This Indicates Airway Obstruction

Assessing Respiratory Function

- Inspiratory & Expiratory Noises

Stridor

a) Inspiratory stridor suggests obstruction above the larynx
b) Inspiratory and expiratory stridor suggests obstruction below the larynx

- Grunting
- Gasping

Assessing Respiratory Function

- **Efficacy of Breathing**

Monitoring – O2 Sa

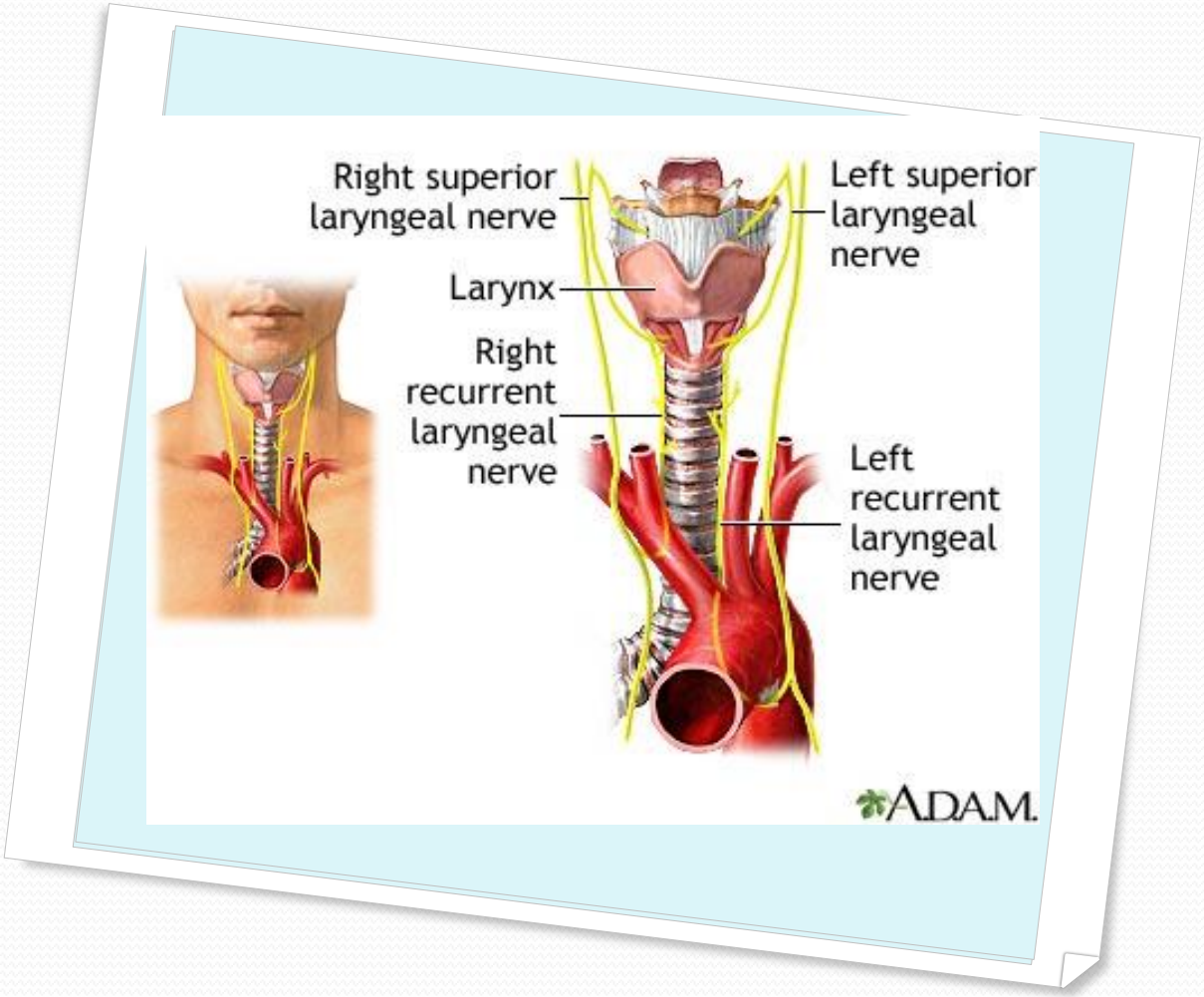
Assessing Respiratory Function

Effects

- Heart Rate
- Colour of skin, note central colour
- Mental status

Autonomic instability can occur on Intubation & Extubation

a) hypertension, tachycardia
b) Hypotension, bradycardia
a) Vagal mediated reflexes i.e. apnoea, larygospasm, bronchospasm, vomiting



Non specific signs of respiratory distress

- Decreased air movement
- Cyanosis/pallor
- Somnolence is a sign of imminent respiratory arrest. (hypercarbia, hypoxia)

- **OPEN AIRWAY & GIVE OXYGEN** is the first line of treatment calling for **HELP – EMERGENCY BELL**

Airway complications- Call for Help

- **Laryngospasm** = 100% 02 with PEEP….Call for HELP Propofol….Suxamethonium Atropine =>Intubate
- **Bronchospasm** = Ventolin inhaler via ETT in 50ml syringe & plunge / IV Ventolin
- **Stridor** = Epinephrine Nebuliser
- **Hypoxia** = OXYGEN
- **Airway** obstruction = Suction and hold airway with 02

A Severe upper airway infection

- **Epiglottitis**

  Keep calm, anaesthetise ASAP - Gas Induction – laryngoscopy –> with chest compression –> looking for a bubble –> intubate with ETT –> Swab –> Abs -> ICU

Maintaining Competence

- Caring for a wide range of patients
- Challenging yourself and request guidance
- Attending education sessions
- Attend education programmes
- Simulation – get involved

Education

- Twice a week 15 minutes
- Equipment day every 3 months
- Simulation every 2 months
- Anaesthetic Overview lecture every 6 months
- Anaesthetic & Recovery Education Programme - 3 annually
- Mandatory study days
- Advanced Anaesthetic & Recovery Graduate Diploma with RCSI
- Paediatric Pain Management Module RCSI

Assessing quality of education

- Learning needs – request suggestions for education
- Quizzes
- Auditing Practice
- Evaluating education Programmes
- End of year reports

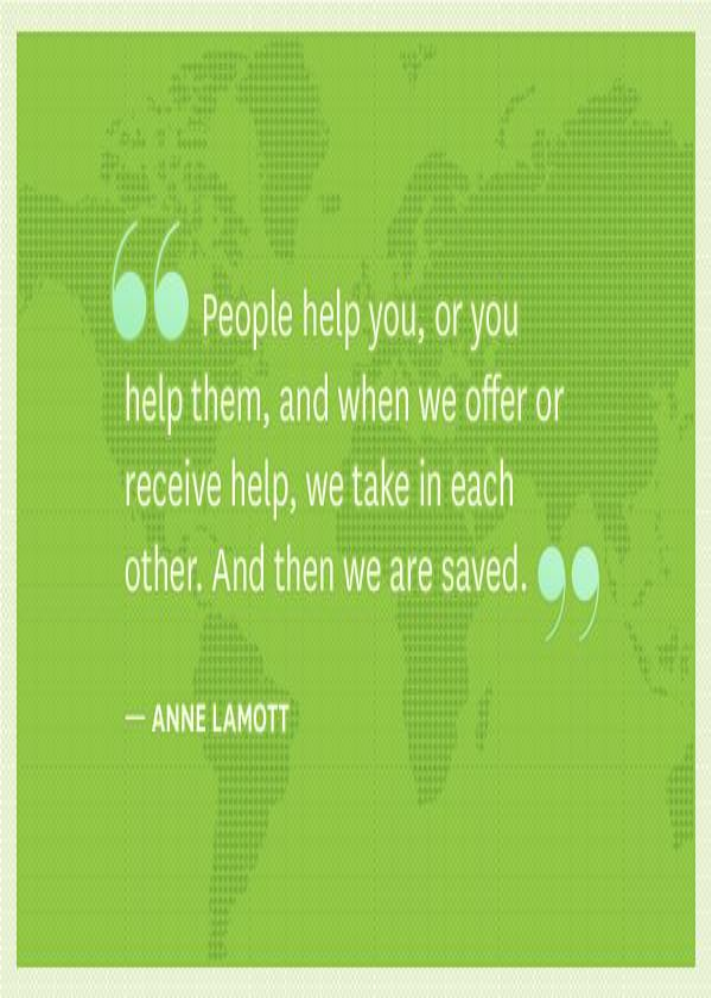
Supports

- CNF
- Preceptors
- Colleagues
- Specific Guidelines
- Peers outside the organisation
- Anaesthetists - AAGBI
- College Colleagues
- IARNA
- BARNA

Be a support

- Look after one another
- Look out for one another
- Nurture our new staff

Look out for one another!



Continuing Education Pathway- CPD OLCHC

Registration as an RCN/RGN

Induction Day & Local Orientation

Relevant Clinical Skills Programmes e.g

- Tracheostomy Care
- Enteral Feeding
- Breastfeeding
- Basic Ventilation
- Neonatal
- Epilepsy
- Diabetes
- Pain
- CLLC Level A
- Final Journeys

Mandatory Training

- IV Study Day
- HIC
- PILS
- CPAT
- PEWS and ISBAR
- AIMP
- Patient Handling
- Fire
- Medication Safety Management

Consolidation of knowledge, skills and attitudes

Preceptorship Programme

Stand Alone Modules e.g. MAIC, MAIC Cardiac & CLLC Level B

Foundation Programme- e.g. PICU

Leadership and Empowerment & Leading in Uncertain Times

Consolidation of knowledge, skills and attitudes

Specialist Programmes- Post Grad Diplomas- e.g. PICU/ ED/OT

Advanced Skills e.g. IV cannulation/ Venepuncture and Immunisations/APLS

H Degree (NFQ level 8) – e.g. CNS/CNF

Master's Degree (NFQ level 9) – e.g. ANP/RNT/DON

PHD (NFQ level 10) - e.g. Research Nurse

Maintaining Professional Competence /Professional Portfolio

Mandatory Education, Training and Up Skilling

Leadership and Management Programmes

National Framework of Qualification (NFQ) Level 8

Level 9

Level 10

CCNF COD 09/14

Recap

- Scope of Practice
- Competencies
- Maintaining Competence
- Anatomical & Physiological differences in Children
- Airway management
- Airway complications
- Supports in the workplace
- Supporting one another
- Being the patients advocate
- Providing safe care at all times

References

- Advanced Paediatric life support. (2011) 5th ed. Advanced Life Support Group. Blackwell Publishing Group, Oxford
- An Bord Altranais (2015) *Scope of Nursing and Midwifery Practice Framework*. Dublin, An Bord Altranais.

Thank you.