NURSE LED EXTUBATION OF PAEDIATRIC PATIENTS IN RECOVERY

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Extubation

- “the goal for all patients who have been intubated and ventilated for any length of time”

(Younker, 2008)
QUESTION!!

1. Have you assisted an anaesthetist in extubating a patient?

2. Have you ever extubated a patient on your own?

3. Was there a policy to support your practice?
BACKGROUND

• National Children’s Hospital founded 1821

• First Children’s Hospital in Ireland and the UK

• In 1998 joined the Adelaide and Meath Hospital in Tallaght, Dublin.
NURSE LED EXTUBTION PROPOSAL

• Paediatric Consultant Anaesthetist
  Dr. Rob Whitty

• Practice in Dublin’s Childrens Hospitals

• New National Childrens Hospital
Benefits of Nurse Led Extubation

• Extubated at the optimal moment
• Decreases risk of post extubation complications
• Nurse Autonomy
• Scope of Practice Expansion
Team Meeting

Multidisciplinary Involvement:
• Nursing Management
• Paediatric Nurses
• Paediatric Consultant Anaesthetists
• Clinical Facilitators
• Nurse Practice Development
• Medical Photography
Policy Purpose

• “Management and support of the safe extubation of patients postoperatively in the recovery room by the assigned registered children’s or registered general nurse”
Policy Aim

• “to provide staff nurses with a framework within which this situation can be effectively and efficiently managed”
PLAN

• Literature Review

• Evidence based research

• No National guidelines

• Other Hospital Policies
• Nurse Led Extubation Policy

• Education Programme

• Competency Assessment Tool

• Supervised Procedure Log
Roles and Responsibilities

- Define each team members role
- Delegation of responsibilities
Protocol Post Operatively

- Procedures outlined prior to recovery transfer
- Communication
Recovery Room
Pre Extubation

- Adequate spontaneous breathing-SpO2 .95%
- Vital Signs
- Laryngeal and pharyngeal reflexes i.e. swallowing reflexes
- Grimacing
- Pupillary dilation
- Eyes opening
- 2 purposeful movements: reaching for the et tube and attempting to pull it out
- Signs of return of muscle tone
- Lifts head/ moves limbs
- Grip strength
- Co-ordinated coughing i.e. deep breaths prior to cough
Extubation

- Ensure muscle relaxant has been fully reversed
- Check for secretions
- Gently suction the pharynx and the nasopharynx
- Place the patient in the appropriate position- supine unless stated otherwise
- Remove tape/tie
- Deflate the cuff
- Gently remove the endotracheal tube
- Check the teeth
- Reapply oxygen via a face mask
- Observe and monitor the oxygen saturation level, respiratory rate and effort and the patient colour
- Communicate with the patient during all stages
Exclusion Criteria

- Child under the age of 12 months
- Known difficult airway
- Emergency surgery: where fasting times are <6 hours
- Obesity
- History of sleep apnoea
- Significant lung disease
- Use of double lumen tubes
- Heavy smoker
- Upper airway surgery
- Anaesthetist unavailable to assist
Paul Harding CNM II

Education Programme

Competency assessment tool

Supervised procedure log
Nurse Led Extubation Education Programme

- Training programme developed
- No nationally recognised education programme
Topics covered in the education programme

- Anatomy and physiology
- Correct patient selection criteria
- When is it safe for nurse led extubation to take place
- Equipment required for safe extubation
- Patient handover
- Extubation procedure
Education Programme cont

• Possible post extubation complications
• Care of the adult and child post extubation
• The correct cleaning of the recovery bay and disposal of equipment.
• Completing the competency assessment tool
Anatomy and physiology

- neonate
- toddler
- child
- adolescent
- adult
Correct patient selection criteria

- Exclusion criteria
- No risks taken
- Safe practice
- List highlighted in the policy
When it is safe for nurse led extubation to take place?

- Location
- Timeframe
- Appropriately trained nurse available to care for the patient
Equipment required for a safe extubation

- Anaesthetic breathing circuits
- Types of airways and masks at hand
- Suctioning devices
- Monitoring
- Re-intubation equipment
- Emergency drugs
Handover

- From perioperative nurse and anaesthetist to recovery nurse
- Completed anaesthetic and surgical record
- Post operative instructions
- Recovery nurse in control before the anaesthetist leaves
Extubation Procedure
Possible post extubation complications

• The potential complications of extubation are:
  - Upper Airway obstruction
  - Laryngospasm
  - Bronchospasm
  - Aspiration
  - Trauma
  - Breath Holding

• Procedure for failed extubation

• Emergency bell
Care of the adult and child post extubation

- Thermoregulation
- Psychological care
- Documentation
Correct cleaning and disposal of equipment

• Recovery bay prepared
• Disposal of used consumables
• New drugs drawn up if required
Completion of the competency assessment tool procedure booklet
What is Competency?

“The ability of the registered nurse to practice safely and effectively, fulfilling his/her professional responsibility within his/her scope of practice.” ABA
Five essential elements of a Competency Based System

• Competencies identified
• Criteria of assessment stated
• Individual development of each competency
• knowledge, skills and attitudes taken into account
• Progression is at participants own rate

Norton, (1987)
Supervised Procedure Log

- Only correctly performed extubations supervised by anaesthetists may be entered in the log
- Paediatric nurses require 12 successful extubations
- Nurses caring for adult patients only require 10.
## Supervised Procedure Log

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Conclusion
REFERENCES

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