



North Thames Paediatric Network

Connecting paediatric services

PCC Competency Pack 3 (Orange) for Children's Nurses

Name: _____

Date Pack Started: _____

Supervisors: _____

Supervisor Name	Sample Signature

Skill	Sign off by Senior Sister/PDN
C1. Recognising deterioration	
C2. Management & care of Humidified High Flow Nasal Cannula Oxygen (HFNCO)	
C3. Management & care of nCPAP	
C4. Caring for a child in DKA	
C5. Caring for a child with complex asthma	
C6. Complex fluid management	
C7. Preparing emergency drugs & sedative infusion management	
C8. Inotropic infusion management	
C9. Basic blood gas interpretation	
C10. Tracheostomy care	
C11. Management & care of Non-Invasion Ventilation (NIV) and Long Term Ventilation (LTV)	
C12. Bereavement and End of Life care	
C13. Communication	

Name of nurse:

The above nurse has completed all the above competencies, and has been deemed competent in the NEL PCC Nursing Competencies.

Signature of supervisor: _____

Printed name: _____

Signature of Sign-Off: _____

Printed name: _____

Has evidenced completion of e-learning modules Y/ N: _____

Has attended PILS ☐ Date attended: _____

Introduction

These competencies have been devised following guidance from the Royal College of Paediatrics and Child Health (RCPCH), and are based on the Children's Critical Care Passport (Time to Move On, 2015). These core critical care skills are considered vital for all nurses working within Level 1 & 2 Critical Care Units, and have been adapted for the use of nurses working within the North East London Paediatric Critical Care Network (NEL PCCN), including the following Trusts:

- Barking, Havering and Redbridge University Hospitals (Queens Hospital & King George Hospital)
- Barts Health NHS Trust (Whipps Cross University Hospital, Newham General Hospital & The Royal London Hospital)
- Homerton University Hospital NHS Foundation Trust

Additional skills have been added to ensure nurses have up to date and appropriate skills for their workplace.

Additional competency packs are required for nursing staff working in specialist areas, for example, Children's Emergency Department (ED) or Paediatric Critical Care Unit (PCCU).

Skills acquisition should be supported by the appropriate education, training and self-directed learning, so that individuals have the essential physiological knowledge to underpin the necessary skills. In order to do this, all nurses will be allocated a supervisor who has achieved a recognised High Dependency course (e.g. HDU modules, EPLS/APLS), and the final sign off must be completed by a Senior Sister/Nurse Educator or equivalent.

Skills within this document do not have to be completed in a particular order. All skills must be signed off in order to complete this competency pack.

Following completion of these competencies, additional opportunities may be available locally to develop your skills within a critical care unit setting. E-learning modules are also available via the local Practice Educator team.

Assessment of competencies

This competency document uses a consistent framework of Benner's Stages of Clinical Competence (1984) to assess competence. It is expected that all nurses will be Competent in all areas of this document.

Level Achieved	Description
Novice	The novice has no experience in the situations they are expected to perform. The novice lacks confidence to demonstrate safe practice and requires continual verbal and physical cues.
Advanced beginner	Demonstrate marginally acceptable performance because the practitioner has had prior experience in actual situations. S/he is efficient and skilful in parts of the practice area, requiring occasional supportive cues. Knowledge is developing.
Competent	Competence is demonstrated by the practitioner. The practitioner is able to demonstrate efficiency, is coordinated and has confidence in his/her actions. Care is completed within a suitable time frame without supportive cues.
Proficient	Perceives situations as wholes rather than in terms of chopped up parts or aspects. Proficient practitioners learn from experience what typical events to expect in a given situation and how plans need to be modified in response to these events.
Expert	The expert practitioner has an intuitive grasp of each situation and zeroes in on the accurate region of the problem without wasteful consideration of a large range of alternative diagnoses and solutions. Operates a deep understanding of the total situation. His/her performance is flexible and highly proficient.

C1.

Recognising deterioration

Level	Skill	Nurse Signature	Supervisor Signature
1 / 2	<p>Able to respond to concerns of deterioration from parents, carers or junior members of nursing staff and act accordingly, including:</p> <ul style="list-style-type: none"> • Reassess the child using an A-E approach • Communicating effectively with the bedside nurse and/or parent/carer to ascertain the child's baseline and any other changes in their condition 		
1 / 2	<p>Identifies interventions that may need to be carried out and discusses with the medical team. For example:</p> <ul style="list-style-type: none"> • Chest assessment • Change/increase in respiratory support • Additional imaging • Sepsis screen • Repeat blood gas • 12-lead ECG • Urgent consultant review 		
1 / 2	Able to clearly articulate the pathway of escalation of a deteriorating patient		
1 / 2	Escalates to medical team appropriately and effectively using the SBAR tool		
1 / 2	Demonstrates knowledge and ability to escalate further when the concerns of nursing staff are not addressed appropriately		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C2.

Management & Care of Humidified High Flow Nasal Cannula Oxygen (HFNCO)

Level	Skill	Nurse Signature	Supervisor Signature
1	Understands and demonstrates knowledge of the clinical indications for use of HFNCO, and refers to the local published guidelines		
1	Demonstrates knowledge of contraindications of the use of HFNCO		
1	Able to select and assemble the equipment required for HFNCO , including: <ul style="list-style-type: none"> How to connect to the gas supply How to competently use the humidifier, its settings and filling of the water chamber How to size and apply the nasal prongs 		
1	Identifies whether a patient is to be enterally fed or not when receiving HFNCO & understands the importance of a gastric tube placement		
1	Recognises the importance of regular repositioning to promote skin integrity, and regularly checks for pressure areas		
1	Recognises criteria for weaning, and can state the clinical indications for reducing the flow/oxygen		
1	Demonstrates understanding of nursing scope of practice and appropriately weans with consultant approval		
1	Has completed the HFNCO equipment competencies, and is compliant with yearly updates		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C3.

Management & care of nCPAP

Level	Skill	Nurse Signature	Supervisor Signature
2	Understands and demonstrates knowledge of the clinical indications for use of nCPAP (Nasal Continuous Positive Airway Pressure) and refers to the local published guidelines		
2	Demonstrates knowledge of contraindications of the use of nCPAP		
2	Recognises the importance of regular repositioning to promote skin integrity, and regularly checks for pressure areas. Rotates the use of prongs and mask to maintain skin integrity		
2	Able to select and assemble the equipment required for nCPAP, including: <ul style="list-style-type: none"> How to connect to the gas supply How to competently use the humidifier, its settings and filling of the water chamber How to calibrate the gases and set up the correct mode How to size and apply the infants bonnet and nasal prongs or mask 		
2	Identifies whether a patient is to be enterally fed or not when receiving nCPAP & understands the importance of a gastric tube placement		
2	Recognises criteria for weaning, and can state the clinical indications for reducing the oxygen		
2	Demonstrates understanding of nursing scope of practice and appropriately weans with consultant approval		
2	Recognises criteria for increasing support, escalates appropriately and carries out interventions within a timely manner		
2	Has completed the nCPAP equipment competencies, and is compliant with yearly updates		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C4.

Caring for a child in DKA (Diabetic Ketoacidosis)

Level	Skill	Nurse Signature	Supervisor Signature
1	Demonstrate an understanding of the pathophysiology and associated signs and symptoms of a child in Diabetic Ketoacidosis (DKA)		
1	Performs, records and interprets blood glucose measurements		
1	Can identify and utilise the care pathway for children and young people with DKA		
1	Demonstrates clinical skill in management of DKA, including: <ul style="list-style-type: none"> Initial resuscitation, using an A – E approach in assessing the patient Administration of insulin (infusion or subcutaneous) Fluid management, including: <ul style="list-style-type: none"> Maintenance fluids Dehydration deficit Total fluid requirements per hour 		
1	Identifies and competently carries out ongoing nursing management, including hourly capillary blood glucose, vital signs & fluid balance		
1	Demonstrates knowledge of possible side effects, including change in conscious level		
1	Performs, records and interprets blood ketone measurements in accordance with local Trust guidelines		
1	Escalates any concerns as appropriate to medical staff		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C5.

Caring for a child with complex asthma

Level	Skill	Nurse Signature	Supervisor Signature
1	Demonstrate an understanding of the pathophysiology of asthma		
1	Identifies the local Acute Severe Asthma Clinical Guidelines and refers to it during clinical practice		
1	Identifies and can describe the differences between acute severe asthma vs. life threatening asthma		
1	Is clinically competent in the initial nursing management of asthma, including: <ul style="list-style-type: none"> • Oxygen therapy • Bronchodilators, including 'back to back' / burst therapy • Steroid therapy 		
1	Can identify and escalate when a child is not responding to treatment. Able to refer to the Clinical Guidelines what the next appropriate steps are, including: <ul style="list-style-type: none"> • Magnesium sulphate, and rationalise • Intravenous steroids • Intravenous Salbutamol or Aminophylline bolus/infusion 		
1	Understands the pharmacological effects of intravenous Salbutamol and Aminophylline, and demonstrates how to (for each drug): <ul style="list-style-type: none"> • Prepare a bolus and administer to a patient • Prepare an infusion and administer to a patient 		
1	Competently carries out ongoing nursing management, including hourly vital signs and fluid balance		
1	Rationalises why additional monitoring may be required following specific treatments		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C6.

Complex fluid management

Level	Skill	Nurse Signature	Supervisor Signature
1	Understands the rationale for strict fluid management, including recording hourly input and output and calculating a balance of a 24 hour period		
1	Able to calculate a child's urine output in ml/kg/hr, and identifies the parameters for a normal urine output dependant on the patients age		
1	Able to document hourly input on a child with multiple infusions (e.g. IV maintenance fluid and IV bronchodilator infusion), and calculate total hourly rate to ensure accurate fluid balance		
1	Demonstrates actions to be taken if a child has positive or negative fluid balance		
1	Able to calculate and adjust a corrected IV maintenance fluid rate dependant on the patients requirement, for example: <ul style="list-style-type: none"> If a child is on 2/3 IV maintenance including infusions + oral intake, decrease IV maintenance accordingly A child has a large amount of IV drugs that need to be included in the fluid balance 		
1	Able to care for a child who requires rehydration (e.g. a dehydrated child who requires normal IV maintenance + deficit), and accurately calculate how much fluid is required over a 48 hour period.		
1	Demonstrates awareness of how to care for a child with an indwelling urinary catheter, and is able to identify potential risks		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C7.

Preparing emergency drugs & sedative infusion management

Level	Skill	Nurse Signature	Supervisor Signature
2	Identifies situations where emergency drug preparing is required		
1	Correctly calculates a child's WETFLAG on every admission		
2	Demonstrates knowledge of the pharmacological effects of the following: <ul style="list-style-type: none"> • Adrenaline • Atropine • Calcium gluconate • Morphine • Midazolam • Vecuronium • Lorazepam • Dopamine 		
2	Demonstrates correct preparation of sedation infusions, including correct labelling of syringes and lines, attaching to patients and rates of infusion		
1	Demonstrates preparation and administration of IV Lorazepam or Buccal Midazolam to a patient in Status Epilepticus as per the CATS Status Epilepticus Clinical Guidelines & local guidelines		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C8.

Inotropic infusion management

Level	Skill	Nurse Signature	Supervisor Signature
2	Able to define what an inotrope is, and can identify commonly used inotropes		
2	Able to rationalise why an inotrope may be used and describe basic mechanism of action of a common inotrope, including changes to observations		
2	Competently prepares an inotrope infusion, and sets up appropriately		
2	Able to identify specific cautions to take with an inotrope, including: <ul style="list-style-type: none"> • Central vs peripheral strength • Infusing with other drugs • Risk of bolusing and actions it could cause • Risk of sudden disconnection 		
2	Able to identify appropriate infusion rates, and guidelines to refer to when required		
2	Utilises appropriate monitoring, including arterial blood pressure – accesses appropriate support as required		
2	Demonstrates how to set up an arterial line transducer – seeks appropriate support as required		
2	Recognises own limitations, and seeks senior help as required		
2	Has completed the Which Inotrope theory quiz (see page 21)		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C9.

Basic blood gas interpretation

Level	Skill	Nurse Signature	Supervisor Signature
1/2	Demonstrates knowledge in the rationales for blood gas sampling		
1/2	Competently obtains a capillary sample, using the correct technique		
1/2	Has completed local training on the Blood Gas Analyser and is able to locate emergency back up when required. Is able to run a sample when required		
1/2	Can identify whether the following parameters are abnormal: <ul style="list-style-type: none"> • pH • CO2 • Lactate • Potassium (K) • Bicarb (HC03) • Base excess (BE) 		
1/2	Has completed the blood gas theory quiz (see page 19)		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C10.

Tracheostomy care

Level	Skill	Nurse Signature	Supervisor Signature
	<i>Has completed local tracheostomy study day: YES/NO</i>		
	<i>Has completed local competency document: YES/NO</i>		
2	Understands the indications of why a child may require a tracheostomy		
2	Can describe the contents of the emergency box, and identifies vital algorithms that need to be available at all times		
2	Competently preforms tracheostomy suction (established > 8 days or long-term tracheostomy), taking into account the correct technique		
2	Can describe the process for preparing for transfer / time out of hospital and equipment required		
2	Demonstrates the ability to provide oxygen therapy via a tracheostomy, and is able to demonstrate how to provide nebulised medication		
2	Can identify appropriate additional tracheostomy adjuncts that may be required whilst in hospital		
2	Describes steps to take in the event of accidental decannulation or tube displacement or blockage, including: <ul style="list-style-type: none"> • Tape & dressing change • Routine tracheostomy change • Emergency tracheostomy change & care 		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C11.

Management & care of Non-Invasive Ventilation (NIV) and Long Term Ventilation (LTV)

Level	Skill	Nurse Signature	Supervisor Signature
	<i>Has completed local NIV/LTV study day: YES/NO</i>		
	<i>Has completed local competency document: YES/NO</i>		
2	Able to describe common indications for the use of non-invasive ventilation (NIV)		
2	Able to differentiate and describe CPAP and BIPAP		
2	Demonstrates how to fit a nasal mask/full face mask, and describes advantages and disadvantages for both		
2	Demonstrates effective mouth and pressure area care whilst a patient is on NIV		
2	Recognises difference between well and unwell settings, and identifies where determined settings are prescribed		
2	If a child is on their unwell settings, able to implement appropriate nursing actions		
2	Able to troubleshoot a range of ventilators, and knows where to seek support when required		
2	Demonstrates knowledge of the escalation pathway if the patient on LTV / NIV deteriorates		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C12.

Bereavement and End of Life care

Level	Skill	Nurse Signature	Supervisor Signature
2	Contributes as a member of the multidisciplinary team to delivering high quality end of life care that is in line with the individuals' /family's needs and preferences		
2	Ensures that child and family comfort, privacy and dignity maintained at all times		
2	Recognizes the limitation of own competence and experience and seeks appropriate support		
2	Explains when it is necessary to refer to the pain team (liaising with palliative care team)		
2	Knows how to access the Trust Bereavement Policy and or Sudden Unexpected Death in Infants and Children Policy		
2	Understand the differences between an expected and unexpected child death		
2	Can access/guide colleagues to E-CDOP to be completed within 24 hours of child death		
2	Demonstrates last offices as per local policy		
2	Awareness of local resources available for families and patients during End of Life care – e.g Making Memories, hospice, follow up care for families		
2	Knows how to access the Trust Do Not Attempt Resuscitate (DNAR) policy		
2	Locates Trust bereavement and mortuary contacts/teams		

Evidence

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Supervisors Name	Signature	Level of competence	Date

C13.

Communication

Level	Skill	Nurse Signature	Supervisor Signature
1	Understands the need for good communication and communicates with children and young people, parents, carers, families and others in a form and manner that: <ul style="list-style-type: none"> Is consistent with their level of understanding, background and preferred ways of communicating Is appropriate to the purpose of the communication and the context in which it is taking place Encourages the effective participation of all involved 		
1	Able to escalate any concerns to the relevant member of the team (including medical, dietician, SALT, physio, etc.), and keep the NIC up to date with the patients plan of care		
1	Uses Trust Guidelines to ensure effective communication practices including: <ul style="list-style-type: none"> Maintaining confidentiality and sharing information in accordance with legal, professional and organisational requirements Producing records and reports that are clear, comprehensive and accurate and that follow the NMC guidelines on record keeping Maintains the security and confidentiality of information 		
1	Shows awareness and demonstrates communicating in a sensitive manner		
1	Demonstrates knowledge of local safeguarding procedures, and competently completes appropriate referrals		

Evidence

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Supervisors Name	Signature	Level of competence	Date

Reflections

This section is to be used by the nurse to record reflections which can be used for feedback or revalidation. A minimum of 3 reflections per pack must be recorded and signed by the Supervisor in order to complete the competency pack.

Shift type:	
Date:	
Shift type:	
Date:	
Shift type:	
Date:	
Shift type:	
Date:	
Shift type:	
Date:	
Nurse Signature: _____ Mentor Signature: _____	

Blood Gas Analysis Quiz

1. What does the term PH mean and what might it indicate?

2. What is the normal range for:

a) PH	
b) Pco2	
c) Po2	
d) HC03	
e) Lactate	

3. What is Lactate and what might it indicate?

4. Please list the possible causes for the following:

a) Respiratory acidosis	
b) Respiratory alkalosis	
c) Metabolic acidosis	
d) Metabolic alkalosis	

5. Describe the following blood gas results

PH 7.1 Pco2 10.0 Po2 8 HCo3 24 Base 2	
PH 7.45 Pco2 2 Po2 10 Hco3 28 Base -1	
Ph 7.35 Pco2 4.4 Po2 9 Hco3 17 Base -2	
PH 7.5 Pco2 3 Bicarb 30 Base -4	

Thank you for completing please speak to your Nurse Educator for feedback

Which Inotrope Quiz

In order to complete this quiz required reading is as follows;

- Use of inotropes in critical care – The Pharmaceutical Journal
Available at: <https://www.pharmaceutical-journal.com/learning/learning-article/use-of-inotropes-in-critical-care/11049283.article?firstPass=false>
- Which inotrope - Shirley Friedman & Joe Brierley

1. Define Cardiac output
2. What is the formula for Cardiac Output?
3. What happens to systemic and pulmonary vascular resistance at birth?
4. Name two positive inotropes and when might you use them?
5. Name five signs and symptoms of shock
 - i)
 - ii)
 - iii)
 - iv)
6. Define warm and cold shock:
 - a) Warm shock:

 - b) Cold Shock
7. What inotrope should you use for
 - a) Warm shock:

 - b) Cold Shock
8. What is the drug calculation for inotrope infusions?
9. What drug would you use in catecholamine resistant shock if the patient is at risk for absolute adrenal deficiency?

References

CATS (2016). *Acute Severe Asthma: Clinical Guidelines*. Available: http://site.cats.nhs.uk/wp-content/uploads/2016/01/cats_asthma_2015.pdf. Last accessed 12th Oct 2017

Great Ormond Street Hospital. (2012). *Appendix 8: A joint competency document for staff and carers working with Long Term Tracheostomy Ventilated Children*. Available: <http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/tracheostomy-care-and-management-review>. Last accessed 16th Oct 2017

Royal College of Nursing (RCN) (2012) *Core competences for nursing children and young people*. Available: https://www2.rcn.org.uk/__data/assets/pdf_file/0006/442887/004202.pdf. Last accessed 3th April 2017

Royal College of Paediatrics and Child Health (RCPCH) (2015) *Appendices: High Dependency Care for Children: Time to Move On*. Available: <http://www.rcpch.ac.uk/sites/default/files/page/Appendices.pdf>. Last accessed 3th April 2017

E-Learning modules:

Available at <https://pccp.healthy london.org/>

Nursing & medical staff working within London will be able to register, and will then need to be verified by their Trust. Please liaise with your Nurse Educator once signed up.

This competency pack has been compiled as part of the Nurse Education Team for the North East London Paediatric Critical Care Network

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