

STANDARDS FOR EDUCATION IN PAEDIATRIC CRITICAL CARE LEVEL 1 AND 2 SPECIALIST NURSING

Background

These Standards are additional to Care of Critically III Children (Paediatric Intensive Care Society, 2015) and relate directly to the recommendations for nationally consistent Level 1 & 2 Paediatric Critical Care Unit specialist nurse education (Paediatric Intensive Care Society UK – Nurse Educators Subgroup (PICS-E), 2015). The standards are written in line with the Time to Move on document (RCPCH, 2014) and permission has been granted to utilise this work.

When used for self-assessment or peer review, the Standards in this section should be reviewed for each area that is separately managed or staffed.

The learning environment and culture meets the learner's needs and ensures they have experience relevant to meet the standard. Multi-professional learning should be encouraged.

Measuring compliance coding (PICS, 2015)

ВІ	Background information for the review team
Visit	Visiting facilities
MP&S	Meeting patients, carers and staff
CNR	Case note review or clinical observation
Doc	Documentation may be in the form of a website or other social media

Ref.

QUALITY STANDARD

LEARNING OUTCOMES

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At the end of the programme the student is expected to:



- Be an expert nurse able to manage infants, children and young people (CYP) requiring level 1 and 2 Critical care (RCPCH, 2014; PICS, 2015), with the ability and insight to seek appropriate support
- Demonstrate the ability to perform a holistic assessment for a critically ill (level 1-2) child and escalate and act on concerns
- Demonstrate the ability to undertake all skills relevant to the care of a level 1-2 critically ill child (RCPCH, 2014)
- Enable an individual to provide safe, high quality care for critically ill children (level 1 &2)

ENTRY REQUIREMENTS

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- Have current clinical experience working in an area that delivers critical care level 1 & 2 or within an area where patients have the ability to deteriorate and require level 1-2 critical care.
- Be working in a clinical capacity for the duration of the programme.

PROGRAMME STRUCTURE

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Education should be delivered in a safe and open environment for patients, staff and learners to ensure provision of high-quality care and experience for service users (DH, 2013; HEE Quality Framework, 2016/2017; NHS HEE)

- Content and assessment at a minimum academic level 6 equivalent
- Will be quality controlled and validated through PICS-E EQA Group
- Have clear links/opportunities to progress onto relevant pathways such as leadership, research, advanced practice, thus linking education to succession planning.

The course must:

- Meet the relevant PICS standards (for Nurse Orientation/ Foundation Programmes or Specialist Nurse Education Programmes)
- Be mapped against Bloom's Reviewed Taxonomy of Learning Domains (Anderson et al, 2001)
- Comply with the Quality Standards within the Heath Education England (HEE) Quality Framework 2016/17
- Comply with the HEE Quality Strategy 2016 2020
- Meet the standards of the Higher Education Academy UK Professional Framework for Teaching and Supporting Learning in Higher Education

Education programme must be inclusive, particularly for learners with disabilities or a learning difficulty and arrangements to support such learners must be in place, evidenced by an Equality Impact Assessment.

Leaners must be supported in practice by use of such methods as mentorship, by someone who has successfully completed a recognised critical care education programme and who has completed a mentorship in practice programme as recommended by the Nursing and Midwifery Council.

The recommended programme duration is between six months and twelve months to allow consolidation of learning in practice, through the use of a critical care skills passport.

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Theoretical Content

Should encompass the following areas:

Physiology and pathophysiology process affecting acutely ill infant/child (CYP)

At the end of a course learners will be able to:

- Demonstrate and evaluate the nursing and medical management of the child in relation to the physiological processes affecting acutely ill children
- Discuss and illustrate the assessment of an acutely ill child requiring level 1 and level 2 critical care.
- Discuss and analyse holistic approaches to care for the critically ill child and their family acknowledging key psychosocial, legal and ethical issues.
- Discuss the evidence base for practice in relation to the care of the critically ill child
- Discuss and illustrate the ability to assess, plan, implement and evaluate care for a critically ill child
- Be able to discuss, debate and manage the professional issues relating to working within the multidisciplinary team and between units, hospitals and community provision.
- Be able to demonstrate decision-making, time management and prioritising care skills.
- Show an increased awareness of the politics and policies surrounding children's critical care and their relevance to practice.
- Practitioners will be able to recognise a sick child, undertake appropriate and timely assessment, provide evidence-based care for the child and participate in transfers to other critical care areas.

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Assessment of the child:

Advanced clinical assessment of the critically ill infant/child (CYP)

- Various communication tools/strategies such as Situation, Background, Assessment, Recommendations / Readback SBAR/RSVP
- Importance of documentation observations and clinical care
- Use of Child / Paediatric Early Warning (PEW) tools

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Respiratory:

- Basic airway care clearance, manoeuvres, use of simple airway adjuncts and management
- Advanced airway management knowledge, including the principles of Intubation
- Tracheostomy care and emergency Tracheostomy Algorithm
- Nasopharangeal airway (NPA)
- Respiratory assessment
- Respiratory anatomy & altered physiology leading to critical illness
- Respiratory distress leading to respiratory failure
- Principles and management strategies for non-invasive ventilation or invasive ventilation
 via a tracheostomy
- Arterial blood gas (ABG) analysis
- Common respiratory pathology seen in Critical Care
- Physiotherapy and suction
- Chest drain management
- Basic chest x-ray interpretation
- Oxygen delivery systems
- Non-invasive ventilation (NIV)
- Long term ventilation
- HFNC therapy
- Bubble CPAP
- Post-operative management of lung transplantation (specific centres only)

code



Cardiovascular:

- Cardiac assessment
- Cardiovascular anatomy and physiology
- Non-invasive and invasive pressure monitoring
- Blood pressure management
- Cardiac chest drains care
- ECG setup and interpretation
- Arrhythmia, dysrhythmia and pacing
- Congenital heart disease, including duct dependant lesions (Specific centres)
- Cardiac failure, shock, low cardiac output state
- Capillary blood sampling

code



Pharmacology:

- Critical care related pharmacology including:
 - o Inotropes, vasodilators,
 - o Analgesics, sedatives and muscle relaxants methods of administration
 - Asthma protocols/pathways
 - Status epileptics protocol/pathways
 - o Antibiotic guardianship

code **Infection & Sepsis:** Infection and Sepsis (Paediatric Sepsis 6) ВІ Visit Septic shock MP&S Hospital acquired infections CNR Immune physiology Doc code **Gastrointestinal aspects:** Bowel surgery including NEC, stoma formation/reversal, bowel lengthening, volvulus Visit MP&S Oesophageal atresia CNR Care of acute liver failure Doc Feeding nutrition Placement and care of feeding tubes Liver centres: care of acute liver failure, chronic hepatic conditions and post-operative transplant management code Trauma: Incidence of major trauma ВІ Visit Mechanism of injury (including NAI) MP&S Assessment (primary and secondary survey) CNR Traumatic brain injury Doc **Burns** Massive Haemorrhage C Spine injury Monitoring and management in the first 24 hours following major trauma Trauma rehabilitation and the family impact code **Neurological aspects:** Neurological anatomy and physiology BI Visit Neurological assessment and coma scoring MP&S Common pathology CNR Raised ICP Doc Management of status epilepticus Management of Meningitis/encephalitis Care of external ventricular drains Sedation Thermoregulation Scoliosis and spinal cord injury Evaluate the care and management of post spinal surgery patients

Advanced Life support if individuals do not hold a formal certificate

Advanced Life Support Skills:

code

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code Renal: Acute Kidney Injury and Renal failure ВІ Visit Post-operative kidney transplant management (in specific centres only) MP&S Fluid and electrolyte management CNR Fluid management, hydration and dehydration Renal Anatomy and Physiology Principles of renal replacement therapies Male and female catheterisation code Retrieval and transport of the critically ill child: Preparing the child for safe transfer Visit MP&S Examine the referral and retrieval team's role in transferring sick children. CNR Review carer and family considerations Doc Work alongside professional colleagues in preparing and transporting a child whose transfer is Time Critical code Pain & sedation management: Pain management physiology and pharmacology ВІ Utilisation of tools pain assessment /reassessment Visit MP&S Drug withdrawal treatment and management CNR Evidence base for treatments Doc Nurse/Patient controlled analgesia **Epidurals** Reversal drugs Surgical care Specific care relating to children post larparotomy Specific care relating to children following thoracotomy Pre and post-operative management of neurosurgical children Complex orthopaedic surgery Gastrointestinal surgical aspects included in the gastrointestinal section. code **Evidence based practice in paediatric critical care:** ВІ Visit Reviewing and analysing the evidence base for PICU nursing care and multi-disciplinary MP&S therapies. CNR Use of research and audit Doc Developing an understanding of national policy initiatives and their implications on service development. The political landscape:

Commissioning for critical care services for children

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Professional, ethical & psychosocial issues:

- Communication with professionals and service users
- Communication with families under stress
- Ethical framework
- End of life care
- Human Factors, Situation Awareness, Risk Management, Escalation language
- Professional nursing issues relating to critical care and accountability.
- Organisational management prioritising workload

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Other key topics to be addressed:

- Revision of all aspects of essential nursing care
- Metabolic and endocrine emergencies, for example DKA
- Specialist needs of the preterm neonate and the neonate in Critical care
- Burns
- Oncology emergencies
- Nutrition in critical illness
- Neonatal critical care: common pathology & management of neonatal conditions

TEACHING AND LEARNING STRATEGIES

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Curricula and programmes are developed and implemented so that learners are enabled to demonstrate and achieve the learning outcomes required for course completion and professional standards. The content should be responsive to changes in treatments, technologies and care delivery models and are reflective of strategic transformation plans across health and care systems. The providers and learners should proactively engage with patients, service users, carers, citizens to shape curricula, assessments and course content to support an ethos of patient partnership within the learning environment (DH, 2013; HEE Quality Framework 2016/2017; NHS HEE).

A range of teaching & learning strategies is encouraged to meet varying learning needs. Teaching & Learning strategies must reflect current clinical practice, be realistic and emphasise reflection upon and learning from the practice environment.

Module leaders should hold or be working towards a qualification in education which should allow the module leader to register as a Nurse Teacher with the Nursing Midwifery Council (NMC). Education qualifications gained prior to publication of these standards are acceptable. Educators should receive institutional support, resources and time to meet their educational and research responsibilities (HEE Quality Framework 2016/2017, NHS HEE).

Organisations must be supportive to facilitate modules and students to attend learning events. This enables the right care to be provided to patients by those with the right knowledge and skills and evidenced based knowledge which underpins safety and high-quality care.

Clinical Exposure

Most active learning will be in the clinical environment. This should be in the home Ward area where critical care level 1 or 2 exposure is available or through visits or placements at the discretion of the home manager, depending on the specialities offered in the home unit and the individual learning needs.

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ASSESSMENT STRATEGIES

Assessment strategies should reflect both theoretical and practice learning in relation to paediatric critical care (level 1 and 2) and be directly linked to the learning outcomes.

Assessments must be:

- Fair, reliable and valid permitting educators to judge that learners have achieved the necessary learning outcomes.
- Mapped to the curriculum or training programme and appropriately sequenced to match progression through the education and training pathway.
- Lead by someone with appropriate expertise in the area being assessed, and who has been appropriately selected, supported and appraised. They are responsible for honesty and effectively assessing the learner's performance and being able to justify decisions.

Assessments could be both summative and formative and include at least one of the following:

- Simulation OSCE's
- Portfolio of Evidence including reflective practice
- Case presentations
- Poster presentation with Viva/Oral case presentation
- Examination
- Demonstration of Clinical Competency
- Essay

Learners should have two attempts permitted to meet the criteria for a pass.

EVALUATION OF THE PROGRAMMES

code



There should be an evaluation strategy to ensure the programme remains responsive to quality assurance and workforce succession planning. If required, the strategy will meet higher education benchmarks.

- 75% of students will pass the programme
- Participant feedback and monitoring change
- Positive staff retention through development
- Local workforce succession planning successes
- Nursing Care Quality Indicators or equivalent
- Safety thermometer or equivalent
- Meeting PICS standards for staffing and staff education, monitored by annual PICANet returns
- Learning from clinical incidents and near misses

^{*}HEE Quality Framework: Quality 6- Developing a Suitable Workforce)

GOVERNANCE QUALITY ASSURANCE code Once approved a course should be reapproved every five years or more frequently if required. BI Please see partner document Standard Operating Procedure for Quality Assurance of Post Visit MP&S Registration Education in Paediatric Critical Care Units CNR Doc **DOCUMENTS** code All course validation and documentation are housed on the PICS website for members only. There is sharing agreement between all centres. Intellectual Property (IP) would be owned by ВІ Visit the local organisations. MP&S CNR Institutions are encouraged to house their documents on the PICS website for sharing with Doc other centres.

References

Anderson, L.W., Krathwohl, D.R., Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Rathe, J., Wittrock, M.C., (2001) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* New York: Pearson, Allyn & Bacon

Department of Health (2013) <u>Education Outcomes Framework</u> Retrieved 10th November 2013 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/175546/Education_outcomes framework.pdf

Health Education England (2016) <u>HEE Quality Framework 2016/17.</u> Retrieved 18th November, 2016 from https://hee.nhs.uk/sites/default/files/documents/HEE J000584 QualityFramework FINAL WEB.pdf

Health Education England (2016) <u>HEE Quality Strategy 2016 – 2020.</u> Retrieved 16th November 2016 from http://www.hee.nhs.uk/sites/default/files/documents/HEE J000584 QualityStrategy FINAL WEB.pdf

The Higher Education Academy (2011) <u>The UK Professional Standards Framework for Teaching and Supporting Learning in Higher Education.</u> Retrieved 11th November 2016 from https://www.heacademy.ac.uk/system/files/downloads/ukpsf_2011_english.pdf

Paediatric Intensive Care Society (2015) *Quality Standards for the Care of Critically III Children*. PICS, London

Royal College of Paediatrics and Child Health (2014) High dependency care for Children – <u>Time To Move On</u>. Retrieved 20th August 2017 from http://www.rcpch.ac.uk/high-dependency-care