Paediatric critical care standards for London

Level 1 and 2

March 2016

Healthy London Partnership – Transforming London's health and care together

About this document

These standards have been developed by the Healthy London Partnership Children and Young People's Critical Care Pathway Group and supplement the revised Paediatric Intensive Care Society (PICS) Standards (2010). They provide formal standards for Paediatric Critical Care Level 1 and 2 specifically within a district general hospital (DGH) environment and once implemented, will address the inequalities across London in service provision.

The purpose of this document is two-fold:

- Firstly, it will be used by NHS Trusts as a self-assessment exercise to determine whether current paediatric critical care services meet appropriate standards.
- Secondly, commissioners will use this document as a commissioning tool to guide their decisions about service provision and quality assurance.

Contents

Glossary

AHP	Allied Health Professionals
ANP	Advanced Nurse Practitioners
APLS	Advanced Paediatric Life Support
BiPAP	Bilevel Positive Airway Pressure
CC	Critical Care
CPAP	Continuous Positive Airway Pressure
CPD	Continuing Professional Development
CYP	Children and Young People
DGH	District General Hospital
DKA	Diabetic Ketoacidosis
ECG	Electrocardiogram
ENT	Ear, Nose and Throat
EPALS	European Paediatric Advanced Life Support
HDC	High Dependency Care
HDU	High Dependency Unit
HRG	Healthcare Resource Group
IVIG	Intravenous Immunoglobin
LTV	Long Term Ventilation
MDT	Multi-Disciplinary Team
NCA	Nurse Controlled Analgesia
NHS	National Health Service
NICE	The National Institute for Health and Care Excellence
NMC	Nursing and Midwifery Council
PCA	Patient Controlled Analgesia
PCC	Paediatric Critical Care
PCCN	Paediatric Critical Care Network
PCCU	Paediatric Critical Care Unit
PEWS	Paediatric Early Warning Score
PIC	Paediatric Intensive Care
PICC	Peripherally Inserted Central Catheter
PICS	Paediatric Intensive Care Society
PICU	Paediatric Intensive Care Unit
PILS	Paediatric Immediate Life Support
RCPCH	Royal College of Paediatrics and Child Health
SALT	Speech and Language Therapy
SPIN	Specialist Interest
SVT	Supraventricular Tachycardia
TPN	Total Parenteral Nutrition

Introduction

Overview

In 2015, following consultation, a multidisciplinary working group including Royal College of Paediatrics and Child Health, Paediatric Intensive Care Society (PICS), Royal College of Anaesthetists, Association of Paediatric Anaesthetists, Royal College of Nursing, Intensive Care Society, British Association of General Paediatricians, WellChild and NHS England representatives published "High Dependency Care for Children – Time To Move On". This document made recommendations for the care of critically ill children and specifically within Appendix 8 provided revised PICS Standards (2010) relating to 'high dependency care'.

A baseline information gathering exercise undertaken by the Healthy London Partnership Children and Young People's Programme Critical Care Pathway Group during 2014 found that there were inequalities in high dependency care services across London. In response the Critical Care Pathway Group decided that formal standards for HDU, specifically within a district general hospital (DGH) environment were required to supplement the revised PICS Standards (2010) and to provide further detail about care in this context.

A standards sub group was formed, chaired by Dr Giles Armstrong, Clinical Lead for the Paediatric Emergency Department, The Whittington Hospital NHS Trust, and Dr Shelley Riphagen, PICU and South Thames Retrieval Service (STRS) Consultant, Evelina London Children's Hospital, Guy's and St Thomas' NHS Foundation Trust. The sub group included clinical representatives from hospitals in London. This document sets out these standards.

Definitions

"High Dependency Care for Children – Time To Move On" recommends a change in terminology away from 'High Dependency Care (HDC)' and 'Paediatric Intensive Care (PIC)' to Basic, Intermediate and Advanced Critical Care (CC). Basic and Intermediate CC should capture activity which would previously be described as HDC. Advanced CC should capture activity that would previously be described as PIC.

All hospitals admitting children should be able to deliver Basic CC in a defined critical care area, classified as a Level 1 Paediatric Critical Care Unit (PCCU). A more limited number of hospitals should be designated as a Level 2 PCCU which is able to deliver Intermediate CC (as well as Basic CC) to children within a defined critical care area. A Level 3 PCCU will be able to deliver Basic, Intermediate and Advanced CC in a centralised tertiary environment with appropriate essential co-locations (on the same site) and standards. The table on page 5 gives an overview of these definitions.

Other standards

These standards are specific to critical care. Other standards for CYP services may reference critical care and should be noted, for instance Major Trauma standards, Healthy London Partnership acute care standards for children and young people, NICE Guidance on Improving Outcomes in Children and Young People with Cancer and the Standards framework for children's palliative care (Together for Short Lives).

Funding

Commissioners are expected, when commissioning acute paediatric services, to provide funding for Basic CC (Level 1) as a minimum. The core HRG funding for the hospital spell should contain an uplift to reflect the significant medical and nursing resource required by some children.

DEFINITIONS			
New Terminology	**Previous Terminology**	**HRG and Definitions**	**Description**
Basic Critical Care - Level 1 Paediatric Critical Care Unit (PCCU)	Standard High Dependency Unit (HDU) - Ward level.	Children requiring monitoring or interventions defined by PCC HRG 07Z (HRG definition basic CC)	Used to describe activities which must be delivered in any hospital which admits acutely ill children and will focus on the common acute presentations and clinical scenarios that require an enhanced level of observation, monitoring and intervention than can be safely delivered on a normal ward.
Intermediate Critical Care - Level 2 Paediatric Critical Care Unit (PCCU) in a DGH setting (LTV)	No standard current terminology in use. Advanced HDU or Level 2 HDU used in some instances	Children requiring monitoring or interventions defined by PCC HRG 06Z (HRG definition intermediate CC)	Used to describe more complex activities and interventions which are undertaken less frequently, for children with a higher level of critical illness, and demand the supervision by competent medical and nursing staff who have undergone additional training. Where this care is not co-located with a Level 3 PCCU these services will be restricted to conditions which can be managed without the onsite, or immediate support of an onsite Level 3 PCCU. In practice this will relate to LTV at present but other conditions might be suitable in the future.
Intermediate Critical Care - Level 2 Paediatric Critical Care Unit (PCCU) in a Tertiary setting	No standard current terminology in use. Advanced HDU or Level 2 HDU used in some instances	Children requiring monitoring or interventions defined by PCC HRG 06Z (HRG definition intermediate CC)	Used to describe more complex activities and interventions which are undertaken less frequently, for children with a higher level of critical illness, and demand the supervision by competent medical and nursing staff who have undergone additional training. The expectation is that this will only be delivered within a Level 3 PCCU (same site).
Advanced Critical Care - Level 3 Paediatric Critical Care Unit (PCCU)	Paediatric Intensive Care Unit (PICU)	Children requiring ventilatory support or support of two or more organs systems. Children at Level 3 are usually intubated to assist breathing. PCC HRG 05Z/04Z Children undergoing complex monitoring and/or therapeutic procedures, including advanced respiratory support. HRG 03Z/02Z (HRG definition Advanced CC)	Used to describe a service for patients with potentially recoverable, life-threatening conditions who can benefit from more detailed observation, treatment and technological support than is available in general wards and departments or high dependency facilities. It is also recognised that end of life management, including potential organ donation and skills in family bereavement care are integral to caring for critically ill children.

Networks

Informal networks that exist have focused on the Advanced CC element of the pathway, not the whole pathway for CC.

All critical care services within London should be supported by Operational Delivery Networks, which are actively managed across all NHS Trust sites in collaboration with commissioners.

The governance responsibility for the delivery of safe, high quality critical care services across the network would need to be established across the Paediatric Critical Care Network (PCCN) in partnership with the individual service providers.

A PCCN will cover a geographically defined area and consider the complete critical care pathway for children. Within each PCCN there will be one or more Level 3 PCCU, as well as a number of Level 1 and Level 2 PCCU. The PCCN will be responsible for ensuring children who require Basic, Intermediate or Advanced CC are able to receive it in a timely manner, and to a high standard.

Network responsibilities

To demonstrate an attainment of minimum quality standards, good risk management and a sharing of good practice across the PCCN.

Clinical governance of the PCCN:

- Training of staff and maintenance of skills and competencies for all DGH staff in the stabilisation and short term management of the critically ill child and their basic and intermediate critical care.
- Identifying those training needs.
- Performance monitoring of critical care services within their catchment network and driving quality improvements.
- Leading audit and guideline development within the Network, and supporting national participation in such activities as required.
- Demonstrating the attainment of minimum quality standards within the network.

Strategy and planning:

- Offering a strategic vision to local commissioners, encouraging appropriate investment, overseeing and auditing local activity.
- A sharing of best practice across and beyond the network.
- Coordination and cooperation with relevant paediatric networks (e.g. cardiac and surgical) and Adult critical care network.
- Involvement of appropriate patient groups.

Data and research:

- Participation in research and dissemination of research findings.
- Work with regional and national research bodies.

Age group

PCC shall be available to all critically ill children from the point of discharge from maternity or a neonatal unit until their 16th birthday. On occasion, it is appropriate for young people beyond their 16th birthday to be cared for in paediatric facilities, either because their underlying disease process is predominantly paediatric or because of their stage of physical or emotional development. Some providers have policies in which patients up to their 19th birthday are classified as children / young people. In the case of these providers, PCCU may accept patients up to their 19th birthday. In certain instances, if a child has an adult medical condition or physiology (e.g. weight) or intoxicated they should be treated in an adult environment with paediatric input. This requires individualised discussion.

Defining PCC interventions in a DGH

A list of PCC interventions which each Level 1 and Level 2 PCCU (DGH) must be able to undertake can be found within this section. Providing a prescribed list of interventions to be undertaken at each level will reduce variation in services when supported by effective commissioning arrangements.

Critical care interventions relating to surgery should only be undertaken in a PCCU where that hospital (same physical site/location) is designated to perform those surgical procedures.

All Level 1 and Level 2 PCCU must be able to appropriately assess, treat, escalate and transfer all time critical cases following discussion and coordination with the children's acute transport services.

Level 1 PCCU (DGH) interventions

AIRWAY:

- Care of child with airway pathology until local anaesthetist provides support.
- Intubation and ventilation of child or baby in an emergency (including all relevant equipment and training) until retrieval team arrives.
- Management of the unventilated child with tracheostomy (>7 days post procedure) – see standard 13.
- Care for child with established naso-pharyngeal airway.

BREATHING:

- Deliver intravenous bronchodilators, or continuous nebuliser for severe asthma in a fully monitored environment until retrieval team arrives or child stabilises.
- Deliver CPAP (<1 years) and ± Nasal humified high flow oxygen (Optiflow or equivalent system) for the support of child with respiratory disease (<2 years).
- Chest physiotherapy for child with respiratory diseases.
- Apnoea requiring intervention in past 24 hours (<3 episodes).

CIRCULATION:

- Ongoing resuscitation and initiation of inotropes.
- Establishment of arterial monitoring and/or central venous access on child requiring resuscitation while awaiting retrieval team arrival (with PCCN and anaesthesia team support).
- Ongoing appropriate monitoring for shocked children who achieve cardiovascular stability after fluid resuscitation only (without requiring inotropic support).
- Arrhythmia due to SVT that responds to adenosine and now controlled (with support of local cardiac centre).
- Detailed fluid balance recording (measuring inputs and outputs continuously/hourly). The child requires complex intravenous fluid management which may incorporate specialised fluids (e.g. 20% human albumin solution, IVIG or similar), replacement fluids or complex intravenous electrolyte management, and urinary catheterisation where necessary. This might include, but is not limited to, children with renal impairment (for any reason), children with surgical/gastro conditions needing replacement fluid.

NEUROLOGY/NEUROSURGERY:

- Delivery of intravenous anticonvulsants to stop seizures.
- Care of a child recovering from status epilepticus (un-intubated but requiring airway protection until return of normal consciousness).
- Care of a child recovering from status epilepticus (intubated and awaiting retrieval service).
- Care of a child recovering from status epilepticus (intubated temporarily at DGH but extubated and woken without needing retrieval.
- Initial resuscitation and management of child with altered level of consciousness, or raised intracranial pressure, or post head injury; including

administration of hypertonic saline or mannitol, until recovers or until transfer (with support of local paediatric neurological or paediatric neurosurgical centre).

ENDOCRINE/METABOLIC:

- Management of DKA as per national guidelines with intravenous insulin, meticulous attention to fluid balance, glucose, ketones and electrolyte management.
- Ability to manage patients with acute deterioration of long term endocrine and metabolic conditions where there is a clear individual patient management plan in place.

PAEDIATRIC SURGERY:

- Post-operative child with mild cardiovascular instability requiring fluid resuscitation only without requiring inotropic support, oxygen therapy ≤40% plus oximetry and ECG.
- Child requiring dedicated pain service which is competent in managing/prescribing for pain (in children) including PCA/NCA.
- Ability to deliver TPN either via PICC line or long term central venous access (provided there is PCCN support in place).

Level 2 PCCU (DGH) interventions

A Level 2 PCCU (DGH) must be able to provide all Level 1 PCCU interventions.

Where there is a failure to respond to treatment as expected and/or the requirement for intervention persists for >24 hours in a Level 1 PCCU setting the child should be transferred to Level 3 PCCU (after discussion with PCCN lead centre).

LTV patients at home or in the community who become unwell will be asked to present at their designated Level 2 PCCU (DGH) rather their nearest Level 1 PCCU (DGH).

It is therefore not anticipated that there will be transfers from Level 1 PCCU (DGH) to Level 2 PCCU (DGH). This mirrors the bypass pathways for major trauma. In the event of unexpected presentation at a Level 1 PCCU (DGH) of a LTV patient or patient with a tracheostomy, the child will be assessed, treated and transferred to a Level 2 or Level 3 PCCU as appropriate. The transfer of this child should be discussed with the children's acute transport services.

LTV patients will typically step down from Level 3 PCCU to Level 2 PCCU (DGH) and then home.

The following levels of care would constitute Level 2 (DGH) interventions.

BREATHING:

- Acute non-invasive ventilation (BiPAP) and CPAP for CYP (≥1 year).
- Management of long term ventilated child (by mask or tracheostomy) as per LTV standards ('Paediatric Long Term Ventilation Service Specification' (NHS England) and 'From hospital to home: Guidance on discharge management and community support for children using long-term ventilation' (Barnardo's)).

PAEDIATRIC SURGERY:

- Post-operative child with potential moderate cardiovascular instability (shocked children who achieve cardiovascular stability after fluid resuscitation only without requiring inotropic support) requiring epidural, o2 therapy >50% or CPAP/BIPAP.
- Child requiring dedicated pain service which is competent in managing/prescribing for pain (in children) including epidural.

It is recognised that some PCCU with tertiary services have arrangements with Level 3 PCCU to deliver short term Level 3 care which are supported by commissioners (including ventilation).

	PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS	
	Standard	**Demonstration of compliance**
	Support for critically ill children and their families	
1	Parents must be given written information about the unit, including visiting arrangements, ward routine and location of facilities within the hospital that the parents may want to use.	Examples of information for parents. Note: Information must be available in formats and languages appropriate to the needs of the patients and their families.
2	Facilities must be available for the parent of each child, including: ■ Somewhere to sit away from the unit (parents room away from the bedside). ■ A kitchen, toilet and washing area. ■ A changing area for other young children.	Facilities available.
3	Overnight facilities must be available for the parent or carer of each child, including a reclining chair, foldaway bed or pull out chair-bed next to the child.	Facilities available.
4	Play therapy support and play therapy facilities must be available during normal hospital hours.	Rota and facilities available.
5	Psychological support should be available to support children, young people and their families during normal hospital hours.	Pathway to access psychological support within hospital or within community.
	Clinical competencies	
6	Lead Consultant Level 1 PCCU A nominated paediatric consultant must have lead responsibility for adherence to PCCN clinical governance arrangements to include policies, procedures and medical staff (and ANP if relevant) competencies relating to paediatric critical care. This consultant must undertake Continuing Professional Development (CPD) of relevance to critical care. Level 2 PCCU (DGH) The Lead Consultant must have achieved the same competencies as required for Level 1 PCCU Lead Consultant and in addition they must have current competencies in managing conditions as agreed by the PCCN for Level 2 PCC. At present this is limited to stable LTV.	Name of consultant and evidence of training and CPD. MDT simulation training compliance. Notes: 1. This may or may not be the same person as the nominated lead for the area. 2. New appointments to posts of consultant with lead responsibility for critical care must have achieved the compliance with 'A Framework of Competencies for Level 3 Training Special Study Module in Paediatric High Dependency Care – (HDU SPIN module) RCPCH, 2009 (Desirable) including 12 months of intensive care experience. 3. Consultants appointed prior to 2016 should have experience of Level 1 PCCU care and be current APLS providers. APLS instructor status is desirable. 4. Annual appraisal to include CPD specific to paediatric critical care. 5. For Level 2 PCCU (only): Annual appraisal to include CPD specific to paediatric critical care and in addition to cover those conditions in Level 2 PCCU (LTV). http://www.rcpch.ac.uk/training-examinations-professional-development/recruitment/special-interest-modules/trainee-spin-mod

	PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS	
	Standard	**Demonstration of compliance**
	Clinical competencies	
7	Middle grade cover Level 1 PCCU A clinician trained to the equivalent of paediatric medicine and neonatal medicine (RCPCH) Level 1 PCC competencies or above must be available on site at all times. This may be a doctor in training but other professionals with equivalent competencies are also acceptable (such as ANP, Specialty doctors, resident Consultants). Level 2 PCCU (DGH) A clinician trained to the equivalent of paediatric medicine and neonatal medicine (RCPCH) Level 2 PCC competencies or above must be available on site at all times. This may be a doctor in training but models that include other professionals with equivalent competencies are also acceptable (such as ANP, Specialty doctors, resident Consultants). A trainee who is at a more junior level but who has completed a minimum of 6 months working in a paediatric intensive care unit is considered to be a satisfactory equivalent.	Medical staff rotas. Evidence of training and CDP. MDT simulation training compliance. Notes: 1. For doctors in training, this will be ST4 or above but may include non-training doctors, with appropriate competencies. 2. For doctors in training they must have either achieved competences in managing conditions appropriate to Level 2 care prior to commencement of role or the unit has robust training arrangements in place to ensure these are achieved within a month of commencement of role.
8	Paediatric consultants Level 1 and Level 2 PCCU All consultants appointed prior to April 2016 must be able to provide evidence to demonstrate that they have achieved previous training requirements (including APLS) or are exempt from such requirements by virtue of experience. The Lead Consultant must ensure that paediatric consultants working in PCCU have the right experience, skill and meet the training requirements. All Consultants appointed must have the skills to manage acutely ill children. Level 2 PCCU (DGH) All Consultants must have achieved competencies in managing conditions appropriate to Level 2 PCC.	**For Level 1 and Level 2 PCCU (DGH):** Evidence of training records or other evidence of competency achieved through experience in specialty. CPD shows evidence of current APLS (Ref training). MDT simulation training compliance. **Level 2 PCCU (DGH):** Regular update of training.
9	Intensive Care support There must be 24-hour on-site ability for safe short term ventilation support (including telephone support) until retrieval service arrives. Trust must decide where all children requiring short term ventilation support should take place onsite.	Details of arrangements. Competencies in ventilation support. Standard Operating Procedure.

PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS		
	Standard	**Demonstration of compliance**
	Clinical competencies	
10	Lead Nurse Level 1 PCCU A nominated Lead Nurse must have lead responsibility for adherence to PCCN clinical governance arrangements to include policies, procedures and nursing staff (and ANP if relevant) competencies relating to paediatric critical care. The Lead Nurse must undertake CPD relevant to critical care. This must be a senior children's trained nurse with Level 1 PCC training (accredited course or equivalent – previously HDU training), competencies and experience in providing paediatric critical care. Level 2 PCCU (DGH) Nominated lead nurse must have the same competencies as required for Level 1 PCC Lead Nurse and in addition they must have current competencies in managing conditions as agreed by the PCCN for Level 2 PCCU.	**For Level 1 and Level 2 PCCU (DGH):** Name of nurse and evidence of training and CPD. Annual appraisal to include CPD specific to paediatric critical care. APLS training. Completion of Critical Care Skills Passport for Children's Nurses working in Level 1 and Level 2 PCCU – Appendix 4 of 'High Dependency Care for Children – Time To Move On". Completion of Critical Care programme for Children's Nurses working in Level 1 and Level 2 PCCU – Appendix 5 of 'High Dependency Care for Children – Time To Move On".
11	Nursing competencies Level 1 PCCU A minimum of two nurses on every shift must have successfully completed all the required PCC skills to Level 1. The nominated nursing lead and their deputy must have successfully completed an accredited HDU course of study in paediatric critical care. A minimum of one nurse on every shift must have completed a recognised paediatric advanced resuscitation course for example EPALS/APLS with a second nurse who has completed a minimum of PILS training (Resuscitation Council UK, 2010/ALSG, 2011). Level 2 PCCU (DGH) A minimum of two nurses on every shift must have completed all the required PCC skills to Level 2 including managing conditions as agreed by the PCCN for Level 2 PCC. One nurse on every shift must have completed an advanced paediatric life support course for example APLS (Advanced Life Support Group 2011), EPALS (Resuscitation Council UK 2010) with two nurses having completed a minimum of PILS training. A minimum of two nurses on each shift must have successfully completed a validated HDU course of study in paediatric critical care. 70% of non-medical staff on shift should have a nursing qualification in paediatrics. This is defined by completion of the skills attained in Appendix 4 of "High Dependency Care for Children – Time to move on" and evidence of acquisition of the necessary underpinning knowledge.	Nursing rotas showing at least one nurse per shift with appropriate competencies. Notes: 1. Appendix 4 and 5 ("High Dependency Care for Children – Time to move on") describes the competencies for Level 1 and Level 2 PCCU, along with recommendations on delivery of courses. 2. Appropriate courses which develop paediatric critical care competencies include: ■ Paediatric intensive care (415) ■ Neonatal intensive care (405) ■ University or NMC accredited high dependency care courses 3. Nurses providing specialist care for specific conditions (for example, burns, renal, cardiac liver disease) must have completed a high dependency module as part of their specialist training or must have additional high dependency training. They are expected to meet the entire PCC core Level 1 and Level 2 competencies as well as any specialty specific competencies. 4. There must be robust methods of ensuring maintenance of competencies, which may include simulation, secondments, courses or training days. 5. If competencies cannot be achieved locally, PCCN Level 3 PCCU's need to facilitate placements (competency based) and access. Access to regionally supported training and simulation days. Trust must support maintenance of nursing skills via appropriate financial and study time release.

PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS		
	Standard	**Demonstration of compliance**
	Clinical competencies	
12	Nurse staffing levels Nurse staffing for children needing critical care will be influenced by a number of factors, including patient diagnosis and complexity, severity of illness (PEWS), and nursing skill mix and seniority. These must be based on a 1:2 ratio, although this will vary with the above factors.	Local audit of paediatric critical care. Notes: 1. In critical care units, a supernumerary shift leader will also be needed. 2. A critical care unit with a number of cubicles will require additional staff.
13	Tracheostomy care All hospital areas, where children receive tracheostomy care must be able assess and treat children with tracheostomy in an emergency. Level 1 PCCU and Level 2 PCCU must be able to provide step down tracheostomy care for a child who has an established unventilated Tracheostomy (greater than one week) with no right of refusal provided there is ongoing PCCN support for training and annual maintenance of skills in place. Level 2 PCCU must be able to provide tracheostomy care for ventilated children preparing for transition to home ventilation package. Trusts and PCCN's must support maintenance of skills in relation to tracheostomy care.	Details of arrangements. Evidence of training and annual updates.
14	Allied Health Professionals Pharmacy Onsite paediatric pharmacist including 24/7 on call. There must be a clinical pharmacist with previous paediatric experience for each PCCU. Facility to deliver TPN with access to pharmacist (competent in clinical TPN) support in normal working hours. Paediatric Critical Care areas must have pharmacy staff with appropriate competencies and job plan time allocated for their work with children needing critical care. There should be PCCN support for all AHP.	Details of pharmacy support available and rotas. Evidence of training, CPD and review of job plans.
15	Physiotherapy Paediatric Critical Care areas must have physiotherapy staff with appropriate competencies and job plan time allocated for their work with children needing critical care. Onsite physiotherapy including 24/7 on call.	Details of pharmacy support available and rotas. Evidence of training, CPD and review of job plans Notes: 1. Physiotherapy on call locally must demonstrate appropriate previous exposure and competence in the management of children. 2. Level 3 PCCU's must support development of physiotherapists who have not had experience with children. Where this is required, local Trusts must provide financial and study time release.

PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS		
	Standard	**Demonstration of compliance**
	Clinical competencies	
16	SALT There must be a Speech and Language Therapist, with previous paediatric experience (including in training) available to cover each paediatric in-patient area in a Trust admitting acute paediatrics. There must be access to SALT, working closely with other AHPs to establish early feeding skills and to establish early intervention.	Details of SALT support available, rotas and evidence of training. Notes: 1. Level 3 PCCU's must support development of SALT who have not had experience with children. Where this is required, local Trusts must provide financial and study time release. 2. A Speech and Language Therapist with specialist knowledge of dysphagia (swallow dysfunction) and tracheostomy should be available, during normal working hours. This is important in the following circumstances: ■ swallow dysfunction may be contributing to respiratory conditions. ■ reintroduction of oral feeding after a period of tube feeding in children who have sustained a CNS insult. ■ formation of a new tracheostomy will have significant implications for communication (loss of voice), and may have significant impact on swallow function.
17	Dietician Dietetic support during normal working hours. There must be a dietician, with previous paediatric experience (including in training) allocated to cover each paediatric in-patient area in a trust admitting acute paediatrics.	Details of dietetic support available, rotas and evidence of training.
18	Other specialties **Any unit providing Level 1 and Level 2 PCCU or above must have access to the following services 24/7:** Onsite anaesthesia for children (including competencies to intubate, establish adequate vascular access and transfer). Access to a dedicated acute pain service team, individuals whom are competent in managing / prescribing for pain in children 24/7. Pathway for urgent 24/7 ENT support. Onsite radiology. Access to 24 hour availability of microbiology support including access to physical review when required within 24 hours. Acute Child and Adolescent Mental Health Services (CAMHS) or equivalent.	Details of arrangements. Rotas for all. Standard Operating Procedure for ENT support and establishment of an emergency surgical airway in a child.

	PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS	
	Standard	**Demonstration of compliance**
	Facilities and equipment	
19	Level 1 PCCU and Level 2 PCCU (DGH) A designated, appropriately designed and equipped unit for providing critical care for children of all ages must be available. Equipment available must be appropriate for the critical care interventions provided. Advice on equipment must be sourced from the PCCN lead centre. Drugs and equipment must be checked in accordance with PCCN and local policy. Level 1 PCCU Children nursed as Level 1 PCC must be monitored with good visibility for nursing and medical staff, allowing regular review, and with a nursing ratio of 1:2. Level 2 PCCU (DGH) A minimum of 2 identified beds in a designated area with the appropriate equipment and nursing ratio of 1:2.	Suitable area containing the drugs and equipment listed in Appendix 5 ("High Dependency Care for Children – Time to move on"). Policy covering frequency of facilities and equipment checks. Evidence of checks having taken place in accordance with this policy.
	Guidelines, policies and procedures	
20	Clinical guidelines / clinical pathways must be in use in the PCCN covering paediatric critical care for the most common paediatric emergencies. These must be standardised across the PCCN.	Evidence of written guidelines / clinical pathways.
21	All paediatric ward areas must use a PCCN PEWS tool to identify children at risk of deterioration. This must be consistent throughout the PCCN.	Evidence of use of tool.
	Service organisation and liaison with other services	
22	The Hospital Board / Trust must be clear whether it provides the following services and the hospital site or sites on which each service is available: ■ Paediatric Critical Care: » Level 1 (DGH) » Level 1 and Level 2 (DGH) » Level 2 and Level 3 (Tertiary)	Written description of services consistent with other publicly available material about the hospital.
23	Trust Boards must acknowledge the needs of the critically ill in their client child population and to take measures to ensure their staff are appropriately trained.	Trust policy document agreed by Clinical Directors and Nurse managers of Paediatrics, Emergency Department (ED) and Intensive Care Unit (ICU). Demonstrable provision of time, facilities and resources to ensure maintenance of skills and knowledge.

PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS		
	Standard	**Demonstration of compliance**
	Service organisation and liaison with other services	
24	Hospitals providing hospital services for children must have a single group responsible for the co-ordination and development of care pathways for critically ill children which must be informed by PCCN standards. The membership of this multi-disciplinary team group must include the nominated lead consultants and nurses for each of the areas where children may be critically ill, and lead anaesthetist (with an interest in paediatrics) and the Resuscitation Officer with lead responsibility for children. This group could be incorporated within the Paediatric Resuscitation Group. Where a Trust has more than one PCCU, this group must provide oversight of these arrangements and ensure that consistent standards are met across all areas. The accountability of the group must include the Hospital Board / Trust Director responsible for children's services. The relationship of this group to the Hospital's mechanisms for safeguarding, risk and clinical governance issues relating to children must be clear.	Terms of reference, membership and accountability of the group. Note: This group may have other functions so long as the standard is met in relation to terms of reference, membership and accountability.
25	The mechanism for approval of all policies and procedures relating to the care of critically ill children must comply with Hospital document control procedures.	Evidence of document control standards for monitoring, review and version control of policies and procedures.
26	The Trust must have implemented all aspects of "Getting the right start: National Service Framework for Children - Standard for Hospital Services" and "National Framework for NHS Continuing Healthcare and NHS-funded Nursing Care" regarding clinical governance, including those relating to serious events and near misses.	Evidence of implementation "Getting the right start: National Service Framework for Children - Standard for Hospital Services" and "National Framework for NHS Continuing Healthcare and NHS-funded Nursing Care".
27	Operational policy All levels of children's critical care must have an operational policy covering: a. Infants and children for whom critical care will normally be provided. b. Admission and discharge criteria. c. Critical care interventions provided and duration of interventions. d. Defined competencies of healthcare staff providing Level 1 and Level 2 PCC interventions (see standards 6-18). e. Escalation criteria to consider transfer for an enhanced level of critical care. f. Arrangements for liaison with transport service/Level 3 PCCU for advice and support. Note: the above will be different for Level 1 and Level 2 PCC.	Operational Policy covering all areas identified.

PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS		
	Standard	**Demonstration of compliance**
	Service organisation and liaison with other services	
28	Long term ventilation A Level 2 PCCU (DGH) providing support for children requiring long term ventilation must meet the relevant standards within the Long Term Ventilation service specification.	Assessment of service against Standards. Notes: 1. The standards currently in use are the West Midlands Quality Review Service Quality Standards for Services providing Long Term Ventilation for Children and Young People.
29	Critical care transfers Patients requiring Level 1 PCCU (DGH) care must not be transferred between hospitals unless escalation to a different level/specialty is required. Where a local unit does not have capacity to admit to a level 1 unit, capacity must be freed by transferring or discharging stable ward patients. For a Level 2 PCCU (DGH) which accepts transfers of children needing critical care from other hospitals, the operational policy must include a protocol for transfer of children with LTV needing critical care which has been agreed with referring hospitals via the critical care transport service. Ambulances services must not transfer children by "Blue light" to non-in-patient paediatric units.	Operational policy. Notes: 1. Transfers of children needing paediatric critical care should be discussed through the critical care transport service in each PCCN.
	Data collection, audit and governance	
30	Each designated PCCU must have a programme of clinical audit and critical incident reporting, so that quality of the delivery of care is monitored. All meetings to review patients and Critical Incidents must be multi professional and involve specialities involved in the child's care, especially when there has been a death of a child. The clinical leads (medical and nursing) will have responsibility for clinical governance, research and audit, training, and liaison with local clinical networks. Regular morbidity and mortality meetings must take place (minimum quarterly). PCCN morbidity and mortality meetings must be held at least once a year.	Evidence of critical incident reporting. Investigation and reporting arrangements. Evidence of multidisciplinary learning. Records of Attendees. Minutes of Morbidity and Mortality meetings with action plans.

PAEDIATRIC CRITICAL CARE (LEVEL 1 AND 2) STANDARDS		
	Standard	**Demonstration of compliance**
	Data collection, audit and governance	
31	Every PCCN must have a Network Data Manager. Every PCCN must have in place a method of submitting data to the Network Data Manager. Every PCCU must have arrangements in place for collection of data on all children receiving paediatric critical care (all levels). There needs to be arrangements in place for sharing data across the PCCN on a yearly basis (report). The Paediatric Critical Care Minimum Dataset (PCCMDS) must be collected on every child admitted to Level 1 and Level 2 PCCU (DGH) and submitted to the network. Level 2 PCCUs must submit data to PICANet on every child admitted to PCCU.	Evidence of data collection. Evidence of submission of data to Secondary User Service (SUS). Evidence of submission of data to Paediatric Intensive Care Audit Network (PICANet).
32	Each hospital will adopt a strategy for data validation to ensure that quality is checked for completeness and accuracy through: ■ Systematic computerised checks ■ Review of patient case notes	Local data quality protocol.

Healthy London Partnership is a collaboration between London's 32 clinical commissioning groups and NHS England London region to support the delivery of better health in London

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