

E07/S/B

**2013/14 NHS STANDARD CONTRACT  
FOR PAEDIATRIC HIGH DEPENDENCY CARE**

**PARTICULARS, SCHEDULE 2 – THE SERVICES, A - SERVICE  
SPECIFICATIONS**

<b>Service Specification No.</b>	E07/S/b
<b>Service</b>	Paediatric High Dependency Care
<b>Commissioner Lead</b>	
<b>Provider Lead</b>	
<b>Period</b>	12 months
<b>Date of Review</b>	

**1. Population Needs**

**1.1 National/local context and evidence base**

Paediatric High Dependency Care (HDC) is the provision of close observation, monitoring and therapies to children who are, or have a significant potential to be, physiologically unstable which is beyond the capability of a general paediatric ward.

Entry into HDC is governed by the degree of physiological instability as much as by diagnosis.

Children exit from HDC either once their physiological condition stabilises to the point where they can be cared for on a general ward or their condition deteriorates and they require care on a Paediatric Intensive Care Unit (PICU).

Paediatric High Dependency Care is provided in an identified Paediatric HDU setting: i.e. it is not provided on a general Paediatric Ward or an Adult HDU

Paediatric High Dependency Care occurs in a number of locations:

- Within or alongside paediatric intensive care units, either as the highest level of care attained by some admissions or else as “step-up” or “step-down” care from an episode of Paediatric Intensive Care.
- In defined high dependency units, associated with other specialist services such as cardiology, burns or specialist surgery, usually in tertiary centres.
- In defined high dependency units that are not associated with specialist

services, usually outside tertiary centres.

Paediatric High Dependency Care will be provided in a manner in which it is under the clinical governance oversight arrangements of a designated Paediatric Intensive Care Unit or through formal clinical Network arrangements.

The PICU service is under particular demand during the bronchiolitis season, which occurs November to January. During this period demand often exceeds capacity with the result that children may be transferred long distances to access care. Adequate provision of HDC care will improve capacity in the system at this crucial time.

### **Evidence Base**

The Paediatric Intensive Care Audit Network (PICANet) report for 2008 – 11<sup>3</sup> shows considerable regional disparity in the use of PICU beds across the country with at the extremes, a two-fold difference between the South West and the North East. This is largely a reflection of the volume of HDC which is provided within the PICU. In the South West, where there is well developed provision in many district general hospitals (DGHs) (largely because of geography), relatively few children are admitted to PICU. In the North-East, very little such provision exists and most children receive their HDC within the PICU. (South West Audit of Critically Ill Children (SWACIC) 10 year report March 2012<sup>4</sup>). Most other regions are at intermediate positions between these two extremes.

An estimate of the impact of this difference can be made from data contained within the PICANet report (see appendix 1). The estimate assumes that the underlying need for PIC does not vary significantly across the country, and that the differences between different regions are due to differences in completeness of HDU provision between regions. Within this model the assumption is that all children admitted to PIC in the south west (incidence 90.4 admissions/100,000) require PIC and that this represents the true prevalence for the rest of the country and that in the North East (prevalence 203.2) all children requiring PIC and HDU are admitted to a PICU. By calculating the differences for each region from these two extremes and multiplying them by the regional populations (0 - 16 year olds), it is possible to establish an estimate of the total HDU need (4), the number (2)

<b>Modelling Paediatric High Dependency for England (per annum)</b>	
1. Total admissions to PICU	14,000
2. HDU admissions	5,000
3. Non PICU HDU admissions	6,000
4. Total HDU need (admissions)	11,000

currently funded within PICU contracts and the unmet (3) need. Numbers in brackets refer to rows in the table below.

[http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4010058](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4010058)

<http://www.isb.nhs.uk/library/standard/174>

[http://www.picanet.org.uk/:\\_Documents/General/Annual%20report%20published%202011/Annual\\_report\\_02\\_12\\_11v2.pdf](http://www.picanet.org.uk/:_Documents/General/Annual%20report%20published%202011/Annual_report_02_12_11v2.pdf)

[http://www.picanet.org.uk/:\\_Documents/General/SWACIC%20Report%202001%20-%202010%20Final%20Version%2020%2002%2012.pdf](http://www.picanet.org.uk/:_Documents/General/SWACIC%20Report%202001%20-%202010%20Final%20Version%2020%2002%2012.pdf)

## **2. Scope**

### **2.1 Aims and objectives of service**

This Service aims to provide high quality Paediatric Critical Care as close to home as possible which meets the standards set out in national guidance for:

- Critically ill children whose severity of illness does not require acute invasive ventilation or specialist care.
- The care of long term ventilated children, either while waiting for discharge to the community or during treatment of episodes of intercurrent illness.

The PHDU Service will achieve these aims by:

- Admitting children for care in designated PHDU beds aligned to the PICU service or in designated local services outside the PICU / regional critical care unit. These limited PHDU facilities will operate as part of a Paediatric Critical Care Clinical Network
- Facilitating both the avoidance of admission to PICU and rapid repatriation to a “network” PHDU facility where that is safe and appropriate
- Avoiding unnecessary transfer for the child to a regional centre where appropriate care can be delivered locally
- Reducing disruption and costs to parent of travel and support
- Enabling improved capacity at regional centres, therefore improving access for other critically ill children

The Failure to provide adequate HDC Facilities has the following consequences:

- Children are transferred to regional centres at levels of illness that could be managed locally, with unnecessary disruption for families and cost and capacity issues for both the regional centres and their transport services.
- Some children have the level of care escalated simply to facilitate safe transfer because of a lack of local facilities.

Children remain in regional centres for longer than is necessary because there is inadequate provision of suitably staffed and equipped beds to support discharge from PICU at the end of an episode of care.

## 2.2 Service description/care pathway

There are two requirements for PHDU capacity – in the care of critically ill children and in the care of the long-term ventilated (LTV) child.

### Critically Ill Children

Critically ill children present to all hospitals which admit children. At presentation they are assessed and stabilised. On-going care depends on the level of intervention required following stabilisation and on the hospital's capacity to provide it. They may require:

- General ward care which is provided in every DGH
- Basic level critical care, which can be provided in tertiary paediatric centres, either within PICU or on PHDUs, or in larger DGHs on PHDUs.
- Advanced level critical care, which is usually provided in regional PICUs but can occasionally occur in Adult ICU.

**General ward provision is outside the scope of this Service Specification.**

### Long Term Ventilation

The numbers of children requiring invasive LTV are increasing by the year. Their care is initiated in a PICU or neonatal unit. Discharge to home may be a protracted process, often requiring multi-agency involvement, adaptations to the home or rehousing and the recruitment and training of a care team. In many areas, care continues to be provided in the regional centre while this process is taking place. This involves persistent disruption and travel for the family, may incur substantial cost to the commissioner and may reduce critical care capacity in the central unit.

Provision of PHDU facilities in some DGHs will enable earlier discharge so care of these children will take place closer to home, will enhance the skills of the DGH staff and will enable staff and family to become familiar with each other. The child may then be admitted to their local hospital for the treatment of some intercurrent illnesses.

A list of interventions to define PHDU were described within the Paediatric Critical Care Minimum Data Set (PCCMDS). **Further work has shown these to be inadequate to describe the work and modification to PCCMDS have been requested. The definition is improved by adding four variables and combining some terms.** The proposed definition is shown below:

### Basic Level Paediatric Critical Care Definitions:

**Level 1** unit interventions (limited to those in PCCMDS and the four additional candidate items)

Oxygen therapy + pulse oximetry + ECG (electrocardiography) monitoring (NB includes high flow oxygen)

Arrhythmia requiring IV anti-arrhythmic

Diabetic Ketoacidosis requiring continuous infusion of insulin

Severe Asthma requiring IV bronchodilator therapy

Reduced consciousness level (Glasgow Coma Scale (GCS) 12 or below)

AND hourly (or more frequent) GCS monitoring

Upper airway obstruction requiring nebulised adrenaline

Apnoea

**Level 2** unit interventions

Any of the above where there is a failure to respond to treatment as expected or the requirement for intervention persists for > 24 hours

Cardiopulmonary resuscitation (CPR) in past 24 hours

Nasopharyngeal airway

Acute non-invasive ventilation, including continuous positive airway pressure (CPAP)  
>80 mls/kg fluid bolus in 24 hours

- \*Status epilepticus requiring treatment with continuous intravenous (IV) infusion (e.g. midazolam)
- \*Arterial line
- \*Central venous pressure monitoring
- \*Epidural
- \*Care of tracheostomy (first 7 days of admission)
- \*Inotropic / vasopressor treatment
- \*Acute cardiac pacing
- \*IV thrombolysis
- \*Acute renal replacement therapy (CVVH (continuous veno venous haemofiltration) or HD (haemodialysis) or PD (peritoneal dialysis))
- \*ICP (intracranial pressure) monitoring or EVD (external ventricular drain)
- \*Exchange transfusion
- \*Plasma exchange
- \*MARS (liver) therapy
- Invasive ventilation of the Long Term Ventilated Child (which is coded as an advanced critical care intervention)

Note: \* denotes those interventions that are almost always performed in a tertiary centre.

The service will additionally follow the standards and criteria outlined in the general specification for specialised children's services (attached as Annex 1 to this Specification).

## **General Paediatric care**

When treating children, the Service will additionally follow the standards and criteria outlined in the Specification for Children's Services (attached as Annex 1 to this Specification)

### **2.3 Population covered**

The service outlined in this specification is for patients ordinarily resident in England\*; or otherwise the commissioning responsibility of the NHS in England (as defined in Who Pays?: Establishing the responsible commissioner and other Department of Health guidance relating to patients entitled to NHS care or exempt from charges).

Note: for the purposes of commissioning health services, this EXCLUDES patients who, whilst resident in England, are registered with a GP Practice in Wales, but INCLUDES patients resident in Wales who are registered with a GP Practice in England.

Specifically this service is for critically ill children whose care needs

- exceed the capacity of a general ward as defined by reaching PCCMDS level 2
- and do not meet the criteria for PICU as defined in the PCCMDS level 3 and above.

In addition, there is a population of post-operative children admitted to HDU in tertiary centres whose care needs are not included in PCCMDS, but for whom there is a local agreement that HDU care is appropriate.

Paediatric HDU services 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 the 19th birthday are classified as children / young people. In the case of these providers PHDU will accept patients up to their 19th birthday.

Children are also admitted to PHDU directly from a neonatal unit.

### **2.4 Any acceptance and exclusion criteria**

#### **Acceptance Criteria**

The service will accept referrals inward from secondary care clinicians. Children will be under the care of a consultant tertiary specialist and/or a paediatrician.

- The service will accept referrals from providers within their Paediatric Critical

Care Network, including general and specialist paediatric wards, emergency departments, children's assessment units, neonatal units and PICUs.

- The service will also accept referrals from other providers of Paediatric Critical Care Services, either to provide specialist care that is not available in the referring unit, or to enable care to be delivered closer to the patient's home.

#### Criteria for referral

The service will accept referrals for children who meet one of the following criteria:

- PCCMDS level 1 care that has persisted for more than 24 hours.
- PCCMDS level 2 care.
- Post-operative children subject to local agreement.

Patients will be accepted subject to capacity. Where demand exceeds capacity a network-wide process of prioritisation will be required.

In addition, in order to qualify for provision of PHD service providers will:

- Meet the 'Core Standards' PICS Standards set out in Appendix 2.
- The RCPCH/PICS PHDU standards which are for publication in early 2013 will be recommended from 2014.
- Submit PCCMDS data to Secondary Users Service (SUS)
- Be a member in a Paediatric Critical Care Network
- Audit activity within their PHDU

#### Exclusions

- Adults
- Infants who have not been discharged from a neonatal unit.
- Children for whom this level of care is deemed to be inappropriate as the result of an agreed end-of-life pathway or DNAR order.

#### 2.5 Interdependencies with other services

Interdependencies in PHDU depend on site and speciality.

For an HDU in a DGH the following services must be co-located (i.e. available 24/7 on the same hospital site.)

- General Paediatrics
- Anaesthesia
- ENT surgery

For HDU in a specialist or tertiary centre the dependencies are defined within the PICS standards document.

### 3. Applicable Service Standards

#### 3.1 Applicable national standards e.g. NICE, Royal College

3.1.1 Core Standards	Providers will need to meet the general obligations for the provision of paediatric services as outlined in the National Service Framework <sup>5</sup> and “ <i>Commissioning Safe and Sustainable specialised paediatric services: a framework of critical inter- dependencies Department of Health (DH) 2008<sup>6</sup>”</i> .
	Standards for the provision of Paediatric High Dependency Care have been published by the Paediatric Intensive Care Society (Paediatric Intensive Care Society - Standards 2008 <sup>7</sup> PICS) and are being updated by a group convened with the Royal College of Paediatrics. A compendium of the current standards is attached as appendix 2.

#### References:

- National Service Framework for Children. Emerging findings. Department of Health, 2003.

[http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4008273](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4008273)

- Commissioning Safe and Sustainable Specialised Paediatric Services - A Framework of Critical Inter-Dependencies. DH 2008

<http://www.picanet.org.uk/Documents/General/AGM%202008/paeds%20interdependencies.pdf>

- [http://www.ukpics.org.uk/documents/PICS\\_standards.pdf](http://www.ukpics.org.uk/documents/PICS_standards.pdf)

### 4. Key Service Outcomes

Provision of PHDU service will:

- Maximise the numbers of children that receive care in their local hospital.
- Reduce the numbers of ventilated and non-ventilated admissions to PICU and/or regional HDU.
- Improve the capacity of the PICU service, which can be measured by a combination of PICANET data and the services’ quality dashboard:



- Reduced refusal rate.
- Fewer cancellations of elective surgery
- Fewer “out-of-catchment” transfers
- Reduced bed occupancy
- A reduced number of days that long term ventilation (LTV) patients remain in tertiary centres if those are not their local hospitals.

## **ANNEX 1 TO SERVICE SPECIFICATION:**

### **PROVISION OF SERVICES TO CHILDREN**

Aims and objectives of service

This specification annex applies to all children’s services and outlines generic standards and outcomes that would be fundamental to all services.

The generic aspects of care:

The Care of Children in Hospital (Health Service Circular HSC 1998/238) requires that:

- Children are admitted to hospital only if the care they require cannot be as well provided at home, in a day clinic or on a day basis in hospital.
- Children requiring admission to hospital are provided with a high standard of medical, nursing and therapeutic care to facilitate speedy recovery and minimize complications and mortality.
- Families with children have easy access to hospital facilities for children without needing to travel significantly further than to other similar amenities.
- Children are discharged from hospital as soon as socially and clinically appropriate and full support provided for subsequent home or day care.
- Good child health care is shared with parents/carers and they are closely involved in the care of their children at all times unless, exceptionally, this is not in the best interest of the child; Accommodation is provided for them to remain with their children overnight if they so wish.

### **Service description/care pathway**

All paediatric specialised services have a component of primary, secondary, tertiary and even quaternary elements.

The efficient and effective delivery of services requires children to receive their care as close to home as possible dependent on the phase of their disease.

Services should therefore be organised and delivered through “integrated pathways of care” (National Service Framework for children, young people and maternity services (Department of Health & Department for Education

and Skills, London 2004)

### **Interdependencies with other services**

All services will comply with Commissioning Safe and Sustainable Specialised Paediatric Services: A Framework of Critical Inter-Dependencies – Department of Health

### **Imaging**

All services will be supported by a 3 tier imaging network („Delivering quality imaging services for children“ Department of Health 13732 March 2010).

Within the network:

- It will be clearly defined which imaging test or interventional procedure can be performed and reported at each site
- Robust procedures will be in place for image transfer for review by a specialist radiologist, these will be supported by appropriate contractual and information governance arrangements
- Robust arrangements will be in place for patient transfer if more complex imaging or intervention is required
- Common standards, protocols and governance procedures will exist throughout the network.
- All radiologists, and radiographers will have appropriate training, supervision and access to continuing professional development (CPD)
- All equipment will be optimised for paediatric use and use specific paediatric software

### **Specialist Paediatric Anaesthesia**

Wherever and whenever children undergo anaesthesia and surgery, their particular needs must be recognised and they should be managed in separate facilities, and looked after by staff with appropriate experience and training.<sup>1</sup> All UK anaesthetists undergo training which provides them with the competencies to care for older babies and children with relatively straightforward surgical conditions and without major co-morbidity. However those working in specialist centres must have undergone additional (specialist) training<sup>2</sup> and should maintain the competencies so acquired<sup>3</sup> \*. These competencies include the care of very young/premature babies, the care of babies and children undergoing complex surgery and/or those with major/complex co-morbidity (including those already requiring intensive care support).

As well as providing an essential co-dependent service for surgery, specialist anaesthesia and sedation services may be required to facilitate radiological procedures and interventions (for example MRI scans and percutaneous nephrostomy) and medical interventions (for example joint injection and intrathecal chemotherapy), and for assistance with vascular access in babies and children with

complex needs such as intravenous feeding.

Specialist acute pain services for babies and children are organised within existing departments of paediatric anaesthesia and include the provision of agreed (hospital wide) guidance for acute pain, the safe administration of complex analgesia regimes including epidural analgesia, and the daily input of specialist anaesthetists and acute pain nurses with expertise in paediatrics.

\*The Safe and Sustainable reviews of paediatric cardiac and neuro- sciences in England have noted the need for additional training and maintenance of competencies by specialist anaesthetists in both fields of practice.

## References

1. GPAS Paediatric anaesthetic services. RCoA 2010 [www.rcoa.ac.uk](http://www.rcoa.ac.uk)
2. CCT in Anaesthesia 2010
3. CPD matrix level 3

## Specialised Child and Adolescent Mental Health Services (CAMHS)

The age profile of children and young people admitted to specialised CAMHS day/in-patient settings is different to the age profile for paediatric units in that it is predominantly adolescents who are admitted to specialised CAMHS in-patient settings, including over-16s. The average length of stay is longer for admissions to mental health units. Children and young people in specialised CAMHS day/in-patient settings generally participate in a structured programme of education and therapeutic activities during their admission.

Taking account of the differences in patient profiles the principles and standards set out in this specification apply with modifications to the recommendations regarding the following:

- Facilities and environment – essential Quality Network for In-patient CAMHS (QNIC) standards should apply (<http://www.rcpsych.ac.uk/quality/quality,accreditationaudit/qnic1.aspx>)
- Staffing profiles and training - essential QNIC standards should apply.
- The child/ young person's family are allowed to visit at any time of day taking account of the child / young persons need to participate in therapeutic activities and education as well as any safeguarding concerns.
- Children and young people are offered appropriate education from the point of admission.
- Parents/carers are involved in the child/young persons care except where this is not in the best interests of the child / young person and in the case of young people who have the capacity to make their own decisions is subject to their consent.
- Parents/carers who wish to stay overnight are provided with accessible accommodation unless there are safeguarding concerns or this is not in the best interests of the child/ young person

## **Applicable national standards e.g. NICE, Royal College**

Children and young people must receive care, treatment and support by staff registered by the Nursing and Midwifery Council on the parts of their register that permit a nurse to work with children (Outcome 14h Essential Standards of Quality and Safety, Care Quality Commission, London 2010)

- There must be at least two Registered Children's Nurses (RCNs) on duty 24 hours a day in all hospital children's departments and wards.
- There must be an Registered Children's Nurse available 24 hours a day to advise on the nursing of children in other departments (this post is included in the staff establishment of 2 RCNs in total).

Accommodation, facilities and staffing must be appropriate to the needs of children and separate from those provided for adults. All facilities for children and young people must comply with the Hospital Build Notes HBN 23 Hospital Accommodation for Children and Young People NHS Estates, The Stationary Office 2004.

All staff who work with children and young people must be appropriately trained to provide care, treatment and support for children, including Children's Workforce Development Council Induction standards (Outcome 14b Essential Standards of Quality and Safety, Care Quality Commission, London 2010).

Each hospital who admits inpatients must have appropriate medical cover at all times taking account of guidance from relevant expert or professional bodies (National Minimum Standards for Providers of Independent Healthcare, Department of Health, London 2002). "Facing the Future" Standards, Royal College of Paediatrics and Child Health.

Staff must carry out sufficient levels of activity to maintain their competence in caring for children and young people, including in relation to specific anaesthetic and surgical procedures for children, taking account of guidance from relevant expert or professional bodies (Outcome 14g Essential Standards of Quality and Safety, Care Quality Commission, London 2010).

Providers must have systems in place to gain and review consent from people who use services, and act on them (Outcome 2a Essential Standards of Quality and Safety, Care Quality Commission, London 2010). These must include specific arrangements for seeking valid consent from children while respecting their human rights and confidentiality and ensure that where the person using the service lacks capacity, best interest meetings are held with people who know and understand the person using the service. Staff should be able to show that they know how to take appropriate consent from children, young people and those with learning disabilities (Outcome 2b) (Seeking Consent: working with children Department of Health, London 2001).

Children and young people must only receive a service from a provider who

takes steps to prevent abuse and does not tolerate any abusive practice should it occur (Outcome 7 Essential Standards of Quality and Safety, Care Quality Commission, London 2010 defines the standards and evidence required from providers in this regard). Providers minimise the risk and likelihood of abuse occurring by:

- Ensuring that staff and people who use services understand the aspects of the safeguarding processes that are relevant to them.
- Ensuring that staff understand the signs of abuse and raise this with the right person when those signs are noticed.
- Ensuring that people who use services are aware of how to raise concerns of abuse.
- Having effective means to monitor and review incidents, concerns and complaints that have the potential to become an abuse or safeguarding concern.
- Having effective means of receiving and acting upon feedback from people who use services and any other person.
- Taking action immediately to ensure that any abuse identified is stopped and suspected abuse is addressed by:
  - having clear procedures followed in practice, monitored and reviewed that take account of relevant legislation and guidance for the management of alleged abuse
  - separating the alleged abuser from the person who uses services and others who may be at risk or managing the risk by
  - removing the opportunity for abuse to occur, where this is within the control of the provider
  - reporting the alleged abuse to the appropriate authority
  - reviewing the person's plan of care to ensure that they are properly supported following the alleged abuse incident.
- Using information from safeguarding concerns to identify non-compliance, or any risk of non-compliance, with the regulations and to decide what will be done to return to compliance.
- Working collaboratively with other services, teams, individuals and agencies in relation to all safeguarding matters and has safeguarding policies that link with local authority policies.
- Participates in local safeguarding children boards where required and understand their responsibilities and the responsibilities of others in line with the Children Act 2004.
- Having clear procedures followed in practice, monitored and reviewed in place about the use of restraint and safeguarding.
- Taking into account relevant guidance set out in the Care Quality Commission's Schedule of Applicable Publications
- Ensuring that those working with children must wait for a full CRB disclosure before starting work.
- Training and supervising staff in safeguarding to ensure they can demonstrate the competences listed in Outcome 7E of the Essential Standards of Quality and Safety, Care Quality Commission, London 2010

All children and young people who use services must be

- Fully informed of their care, treatment and support.
- Able to take part in decision making to the fullest extent that is possible.
- Asked if they agree for their parents or guardians to be involved in decisions they need to make.

(Outcome 4I Essential Standards of Quality and Safety, Care Quality Commission, London 2010)

### Key Service Outcomes

Evidence is increasing that implementation of the national Quality Criteria for Young People Friendly Services (Department of Health, London 2011) have the potential to greatly improve patient experience, leading to better health outcomes for young people and increasing socially responsible life-long use of the NHS. Implementation is also expected to contribute to improvements in health inequalities and public health outcomes e.g. reduced teenage pregnancy and STIs, and increased smoking cessation. All providers delivering services to young people should be implementing the good practice guidance which delivers compliance with the quality criteria.

Poorly planned transition from young people's to adult-oriented health services can be associated with increased risk of non adherence to treatment and loss to follow-up, which can have serious consequences. There are measurable adverse consequences in terms of morbidity and mortality as well as in social and educational outcomes. When children and young people who use paediatric services are moving to access adult services (for example, during transition for those with long term conditions), these should be organised so that:

- All those involved in the care, treatment and support cooperate with the planning and provision to ensure that the services provided continue to be appropriate to the age and needs of the person who uses services.

The National Minimum Standards for Providers of Independent Healthcare, (Department of Health, London 2002) require the following standards:

- **A16.1** Children are seen in a separate out-patient area, or where the hospital does not have a separate outpatient area for children, they are seen promptly.
- **A16.3** Toys and/or books suitable to the child's age are provided.
- **A16.8** There are segregated areas for the reception of children and adolescents into theatre and for recovery, to screen the children and adolescents from adult patients; the segregated areas contain all necessary equipment for the care of children.
- **A16.9** A parent is to be actively encouraged to stay at all times, with accommodation made available for the adult in the child's room or close by.
- **A16.10** The child's family is allowed to visit him/her at any time of the day, except where safeguarding procedures do not allow this
- **A16.13** When a child is in hospital for more than five days, play is managed and supervised by a qualified Hospital Play Specialist.
- **A16.14** Children are required to receive education when in hospital for more than five days; the Local Education Authority has an obligation to meet this need

and are contacted if necessary.

- **A18.10** There are written procedures for the assessment of pain in children and the provision of appropriate control.

All hospital settings should meet the Standards for the Care of Critically Ill Children (Paediatric Intensive Care Society, London 2010).

There should be age specific arrangements for meeting Regulation 14 of the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010. These require:

- A choice of suitable and nutritious food and hydration, in sufficient quantities to meet service users' needs;
- Food and hydration that meet any reasonable requirements arising from a service user's religious or cultural background
- Support, where necessary, for the purposes of enabling service users to eat and drink sufficient amounts for their needs.
- For the purposes of this regulation, "food and hydration" includes, where applicable, parenteral nutrition and the administration of dietary supplements where prescribed.
- Providers must have access to facilities for infant feeding,
- including facilities to support breastfeeding (Outcome 5E, of the Essential Standards of Quality and Safety, Care Quality Commission, London 2010)

All paediatric patients should have access to appropriately trained paediatric trained dieticians, physiotherapists, occupational therapists, speech and language therapy, psychology, social work and CAMHS services within nationally defined access standards.

All children and young people should have access to a professional who can undertake an assessment using the Common Assessment Framework and access support from social care, housing, education and other agencies as appropriate

All registered providers must ensure safe use and management of medicines, by means of the making of appropriate arrangements for the obtaining, recording, handling, using, safe keeping, dispensing, safe administration and disposal of medicines (Outcome 9 Essential Standards of Quality and Safety, Care Quality Commission, London 2010). For children, these should include specific arrangements that:

- ensure the medicines given are appropriate and person-centred by taking account of their age, weight and any learning disability
- ensure that staff handling medicines have the competency and skills needed for children and young people's medicines management
- ensure that wherever possible, age specific information is available for people about the medicines they are taking, including the risks, including information about the use of unlicensed medicine in paediatrics.

Many children with long term illnesses have a learning or physical disability.  
Providers should ensure that:

- They are supported to have a health action plan
- Facilities meet the appropriate requirements of the Disability Discrimination Act 1995
- They meet the standards set out in Transition: getting it right for young people. Improving the transition of young people with long-term conditions from children's to adult health services. Department of Health, 2006, London

Interim for Adoption from 01/10/13



**Appendix 1. Estimate of HDU requirement derived from PICANET report 2008-2010.**

SHA	Population <16,2009 data	Rate of PICU admissions per 100,00 children 2008-2010 average	Incidence	Total admissions (inc x Population)	HDU admissions (inc x Population)	PIC admissions (total – HDU)	Unmet Demand Ratio (UDR)	Unmet HD (UDR x population)	Total HD
North East	459900	203.2	112.8	935	519	416	0	0	519
North West	1298300	139.3	48.9	1809	1809	1174	63.9	830	1464
Yorkshire And the Humber	974000	140.1	49.7	1365	1365	880	63.1	615	1099
East Midlands	816900	139.4	49	1139	1139	738	63.8	521	921
West Midlands	1052900	141.2	50.8	1487	1487	952	62	653	1188
East of England	1088400	120.9	30.5	1316	332	984	82.3	896	1228
London	1498700	170.6	80.2	2557	1202	1355	32.6	489	1691
South East Coast	812800	178.2	87.8	1448	714	735	25	203	917
South Central	780600	115.8	25.4	904	198	706	87.4	682	881
South West	921900	90.4	0	83a	0	833	112.8	1040	1040
	9704400			13791	5019	8773		5928	41947



Interim for Adoption from 01/10/13

<b>Appendix 2. Standards for delivery of Paediatric High Dependency Services</b>		
<b>CONFIGURATION AND ORGANISATION OF SERVICES</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
1	<p>The Hospital Board / Trust should be clear whether it provides the following services and the hospital site or sites on which each service is available:</p> <ul style="list-style-type: none"> <li>• Paediatric High Dependency Care</li> <li>• Paediatric Intensive Care</li> </ul>	<p>Written description of services consistent with other publicly available material about the hospital</p>
2	<p>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</p>	<p>Trust policy document agreed by Clinical Directors &amp; Nurse managers of Paediatrics, Emergency Department (ED) and Intensive Care Unit (ICU)</p> <p>Demonstrable provision of time facilities and resources to ensure maintenance of skills and knowledge.</p>
3	<p>Hospitals providing hospital services for children should have a single group responsible for the coordination and development of care of critically ill children.</p> <p>The membership of this group should include the nominated lead consultants and nurses for each of the areas where children may be critically ill, and lead anaesthetist and the Resuscitation Officer with lead responsibility for children.</p> <p>The accountability of the group should include the Hospital Board /Trust Director responsible for children's services. The relationship of this group to the Hospital's mechanisms for safeguarding and clinical governance issues relating to children should be clear.</p>	<p>Terms of reference, membership and accountability of the group.</p> <p>Note: This group may have other functions so long as the standard is met in relation to terms of reference, membership and accountability.</p>
4	<p>The mechanism for approval of all policies and procedures relating to the care of critically ill children should comply with Hospital document control procedures.</p>	<p>Evidence of document control standards for monitoring, review and version control of policies and procedures.</p>

5	<p>The Trust should have implemented all aspects of the National Service Framework for Children: Standard for Hospital Services regarding clinical governance, including those relating to serious events and near misses.</p> <p>All meetings to review patients and Critical Incidents should be multi-professional and involve all specialities involved in the child's care, especially when there has been a death of a child. This should involve Primary and Community Care where indicated</p>	<p>Investigation and reporting arrangements. Evidence of multi-disciplinary learning. Presence of a risk register.</p> <p>Records of Attendees.</p> <p>Note: Further details of the 'serious events and near miss' requirements on hospital Trusts are given in the National Service Framework for Children</p>
<b>SERVICE DELIVERY AND CLINICAL COMPETENCIES</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
6	<p>On each hospital site there should be twenty-four hour cover by:</p> <ul style="list-style-type: none"> <li>• A consultant paediatrician, and</li> <li>• A consultant anaesthetist</li> </ul> <p>Both of whom are able to attend within 30 minutes and do not have responsibilities to other hospital sites.</p>	Medical Staff Rotas
7	<p>On each hospital site there should be 24-hour access to pharmacy, biochemistry, haematology, imaging and physiotherapy services and daily access to dietetic services. These services should be able to support the care of children.</p>	<p>Facilities available.</p> <p>Note: Services may be provided on site or through appropriate on call / network arrangements.</p>
8	<p>There should be access to other specialties, for example, 24-hour ENT cover for tracheostomy care.</p>	Details of arrangements.
9	<p>Appropriately qualified play specialist should be available</p>	Name of play specialists
10	<p>Hospitals without paediatric intensive care facilities on site should, by default, make all their paediatric intensive care referrals to the Paediatric Transport Service.</p>	Evidence of local Protocol
11	<p>There should be 24-hour on-site</p>	Details of arrangements

	access to a senior nurse with intensive care skills and training (eg. ENB 100, 405, 415 – or other accredited ICU qualification)	
12	All anaesthetists and paediatricians with emergency paediatric responsibilities should have up to date knowledge of advanced paediatric life support / resuscitation and stabilisation of critically ill children	Training records
13	<p>There should be a nominated paediatric consultant lead for paediatric high dependency care responsible for:</p> <ul style="list-style-type: none"> <li>• Protocols covering assessment and management of the critically ill child</li> <li>• Ensuring training of relevant medical staff to maintain competencies stipulated in standard 15</li> </ul> <p>This consultant should undertake regular clinical work within the area for which s/he is responsible.</p>	<p>Name of consultant</p> <p>Evidence of protocols</p>
<b>SERVICE DELIVERY AND CLINICAL COMPETENCIES</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
14	<p>There should be a nominated senior children's nurse with responsibility for high dependency care.</p> <p>The lead nurse should be a senior children's trained nurse with a critical care qualification or at least five years' experience in acute paediatric care.</p> <p>The lead nurse should ensure that all qualified nursing staff have up to date and appropriate paediatric resuscitation training PLS (or equivalent) annually.</p>	<p>Name of nurse</p> <p>Training Records.</p>
15	<p>A clinician should be available and resident 24 hours a day for the paediatric high dependency unit with competencies in:</p> <ul style="list-style-type: none"> <li>• Assessment of the ill child and recognition of serious</li> </ul>	<p>Medical staff rotas</p> <p>Details of training competencies and experiences of staff</p>

	<p>illness and injury</p> <ul style="list-style-type: none"> <li>• Initiation of appropriate immediate treatment</li> <li>• Prescribing and administering resuscitation and other appropriate drugs</li> <li>• Provision of appropriate pain management</li> <li>• Effective communication with children and their families Paediatric advanced life support</li> </ul>	
16	Nurse to patient staffing ratios for children requiring high dependency care should be 1:2 or 1:2 nursed in a cubicle.	Local audit of high dependency care.
17	There should be a minimum of two Registered Nurses (Child) available at all times in a 24 hour period to supervise care. A RN (Child) with valid competency in advanced life support e.g. European Paediatric Life Support (EPLS)/ Advances Paediatric Life Support (APLS), will be present in the paediatric service at all times throughout a 24 hour period.	<p>Nursing rotas or local audit.</p> <p>Training records</p>
18	<p>All children requiring paediatric HD care should be cared for by a trained children's nurse with competencies in delivering paediatric high dependency care.</p> <p>Local competency training packages should be available for nurses providing paediatric high dependency care. Competency must be assessed by an assessor and updated periodically. This should include training in the skills necessary to communicate with and provide emotional support for parents and children.</p>	<p>Nursing rotas showing at least one nurse per shift with appropriate competency or local audit of high dependency care.</p> <p>Record of individuals completing competency packages</p>
19	All paediatric ward areas should use an early warning tool to identify children at risk of deterioration	Evidence of use of tool
20	If children with tracheostomies are	Nursing rotas showing at least one

	cared for on the ward, there should be a nurse with skills in tracheostomy care on each shift.	nurse per shift with appropriate competency or local audit
21	All staff involved with the care of children should have regular training in safeguarding children appropriate to their role.	Training records. Staff awareness of local policy and the appropriate person to contact with concerns.  Note: This standard is included to ensure safeguarding is not forgotten.
22	All staff should receive training in infection control, moving and handling, fire procedures and risk assessment.	HR Records.
<b>GOVERNANCE, GUIDELINES, AND POLICIES</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
23	There should be a nominated paediatric consultant and a nominated lead nurse with responsibility for paediatric high dependency care.  The clinical leads will have responsibility for clinical governance, research and audit, training, integration and liaison with local clinical networks. Morbidity and mortality meetings should be held at least twice yearly at intervals of no more than 6 months and each designated PHDU should have a programme of clinical audit and critical incident reporting, so that quality of the delivery of care is monitored.	Name of paediatric consultant. Name of lead nurse. Appropriate qualifications Minutes of Morbidity and Mortality meetings with action plans  Evidence of critical incident reporting
24	There should be a nominated consultant anaesthetist with responsibility for policies and procedures relating to emergency and elective anaesthesia of children.	Name of consultant
25	A Hospital policy on staff acting outside their area of competence because this is in the best interests of the child should be in use covering: <ul style="list-style-type: none"> <li>• Exceptional circumstances</li> </ul>	Written policy  Note: This policy should be communicated to staff throughout

	<p>when this may occur</p> <ul style="list-style-type: none"> <li>• Staff responsibilities</li> <li>• Reporting of events as untoward clinical incidents</li> <li>• Support for staff</li> </ul>	children's services
26	The nominated paediatric consultant and nurse should lead a multidisciplinary users group and develop links with the Transport service, relevant PIC Network and lead PICU to agree protocols for resuscitation and stabilisation, transfer, criteria for admission and discharge and treatment of all major conditions concerned. Links should be maintained with emergency care departments and adult critical care.	Evidence of meetings and written protocols, policies and procedure documents
27	There should be a Trust policy in dealing with bereavement which specifically covers the death of a child and bereavement of parent's carers and siblings. This policy should address the possibility of organ donation and detail transplant coordinator contact details.	Evidence of Child-related Bereavement procedure. The PICS document – "Standards for Bereavement Care 2002" should be consulted.
28	<p>Guidelines should be in use covering the type of children who high dependency care will normally be provided and the expected duration of this care. These guidelines should specify:</p> <ul style="list-style-type: none"> <li>• Admission criteria for paediatric high dependency care</li> <li>• Discharge criteria for paediatric high dependency care</li> <li>• Treatment of all major conditions including head injuries, meningococcal infection, asthma, status epilepticus, upper airway</li> </ul>	<p>Written guidelines.</p> <p>Note:</p> <ol style="list-style-type: none"> <li>1. All in-patient units should be able to provide HD care for at least 48hours. Some services may be staffed and designated to provide HD care for longer periods of time.</li> <li>2. Guidelines should be clear on roles and responsibilities of all members of the multi-disciplinary team including anaesthetic services</li> <li>3. Guidelines should include actions to prevent /prepare for deterioration.</li> </ol>



	obstruction and inhaled foreign body.	
29	<p>Protocols should be in use covering transfer of seriously ill children within the hospital e.g. imaging or theatre.</p> <p>The protocol should specify escort arrangements and equipment required.</p>	Written protocol
30	<p>Protocols should be in use covering transfer or accessing advice from the Transport Service (Embrace), lead PIC centre or specialised intensive care e.g. Burns care or ECMO.</p> <p>Decisions on whether a child needs to be transferred should be taken by the appropriate local consultant in conjunction with a lead centre PIC consultant and the Transport service consultant.</p> <p>All Trust Boards, Purchasers &amp; Commissioners should satisfy themselves that these arrangements are in place.</p>	Written protocol for 24-hour advice, including referral protocols and contact numbers, agreed with Transport Service and Lead PIC centre these should be agreed, regularly reviewed and easily available.
31	<p>The transfer protocol should include local guidelines on the maintenance of intensive care for a critically ill child until the child's condition improves or the retrieval team arrives.</p> <p>These guidelines should stipulate the location(s) in which children may be maintained. If the location is a general intensive care unit then the guidelines should specify:</p> <ul style="list-style-type: none"> <li>• The circumstances under which a child will be admitted to and stay on the unit</li> <li>• A children's nurse should review the child at least every 12 hours during their</li> </ul>	<p>Local guidelines on maintenance of intensive care.</p> <p>Note The requirement for PIC does not apply to children aged 16years and over.</p>

	<p>stay on the unit</p> <ul style="list-style-type: none"> <li>• There must be discussion with a PIC about the child's condition prior to admission and regularly during their stay</li> <li>• A local paediatrician should agree to the child being moved to the unit and should be available for advice and review of the management.</li> </ul>	
32	<p>Written guidelines should outline the arrangements in place for situations where retrieval is time critical e.g. intracranial bleeding. The arrangements should include:</p> <ul style="list-style-type: none"> <li>• Advice from Transport service and lead PICU</li> <li>• Escort team of comprising of senior clinician, senior nurse / ODP with experience of airway management and care of the critically ill child</li> <li>• Appropriate drugs and equipment for an emergency transfer</li> <li>• Arrangements for ensuring restraint of children, equipment and staff during transfer</li> <li>• Arrangements for emergency transport with ambulance service</li> </ul>	<p>Written guidelines. Inventory of drugs and equipment Policy covering frequency of checking and evidence of checks having taken place in accordance with this policy</p> <p>Notes:</p> <ol style="list-style-type: none"> <li>1. The referring consultant should judge the appropriateness of the escort team.</li> <li>2. Equipment used during transport should be capable of being secured to the stretcher and there should be no loose items in the rear cabin.</li> <li>3. Information about ambulance services should include contact information, vehicle specification and response times</li> </ol>
<b>PERSONALISED CARE</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
33	Parents / carers should be given written information about the ward, including visiting arrangements, car parking, ward routine and location of facilities within the hospital that the parents may want to use.	Examples of information for parents.
34	Parents / Carers should be given written information about the ward, including visiting arrangements, car parking, ward routine and	Examples of information for parents

	location of facilities within the hospital that the parents may want to use.	
35	Parents/ carers of children needing emergency transfer should be given all possible help regarding transport, hospital location, car parking, and location of the PIC unit to which their child is being transferred	Parent information leaflet including – map, contact numbers and details of tertiary PIC.
36	The following support services should be available: <ul style="list-style-type: none"> <li>• Social worker</li> <li>• Interpreters</li> <li>• Patient advice and advocacy services</li> </ul>	Support services and relevant contact information readily available
37	Facilities should be available for the parent of each child, including: <ul style="list-style-type: none"> <li>• Somewhere to sit away from the ward</li> <li>• A quiet room for relatives</li> <li>• A kitchen, toilet and washing areas and a changing area for other young children</li> </ul>	Facilities available.
38	Units expecting to provide paediatric high dependency care for longer than 48 hours should have appropriate facilities for parents and carers to stay overnight, for example, one of: <ul style="list-style-type: none"> <li>• A bed at “dressing gown” distance</li> <li>• Accommodation away from the ward</li> <li>• A hostel for parents to stay with their children in preparation for going home</li> </ul>	Facility available.  <i>Note: This standard is not applicable to units that expect to provide high dependency care for up to 48 hours only.</i>
<b>EQUIPMENT AND FACILITIES</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
39	An appropriately designed and equipped area including disposables, or adequate mobile equipment, for resuscitation and stabilisation of critically ill children of all ages should be available.  Drugs and equipment should be	Suitable area containing the drugs and equipment listed in Appendix 3  Viewing facilities  <i>Note: Equipment should be appropriate for the ages of children</i>

	checked in accordance with local policy.	<i>for whom the area is contracted to provide care.</i>  Policy covering frequency of checking and evidence of checks having taken place.
40	Near patient for blood gases electrolytes and lactate should be available	Viewing facilities
<b>DATA COLLECTION AND AUDIT</b>		
<b>Ref</b>	<b>Standard</b>	<b>Demonstration of Compliance</b>
41	All areas providing paediatric HD care will have a system in place to collect, input and export information for the Paediatric Critical Care Minimum Data Set	Evidence of use of tool in place
42	All hospitals admitting children for PHDC will comply with all reasonable requests for information and provide performance reporting in the manner and format agreed with service commissioners.	Purchasing and Commissioning Authorities are to require that these region-wide monitoring audits are set up and built into future contracts
43	Each hospital will adopt a strategy for data validation to ensure that quality is checked for completeness and accuracy through: <ul style="list-style-type: none"> <li>• Systematic computerised checks</li> <li>• Review of patient case notes</li> </ul>	Local data quality protocol
44	Copies of monitoring returns must be submitted to the commissioners on request. Additional indicators may need to be monitored upon request.	

**APPENDIX 3: The following equipment is expected to be available for delivering HDC.**

<b>Bed Space Layout</b>	<b>Essential</b>	<b>Desirable</b>
6 – 10 Electrical outlets with one connection to UPS	•	
2 outlets for oxygen	•	
1 compressed air outlet	•	
1 low pressure and 1 high pressure vacuum outlets	•	
Examination light	•	
Emergency call /bell	•	
Clock	•	
<b>Patient Monitoring</b>	<b>Essential</b>	<b>Desirable</b>
Multi-module monitor (compatible with ICU / Theatres) providing:	•	

Continuous ECG display with HR monitoring	•	
Pulse oximetry	•	
Invasive arterial blood pressure and CVP (central venous pressure) monitoring	•	
Non – invasive monitoring with full range of cuff sizes	•	
Temperature monitoring	•	
Capnograph	•	
<b>Equipment</b>	<b>Essential</b>	<b>Desirable</b>
Blood glucose monitor	•	
Access to blood gas analyser	•	
Resuscitation trolley	•	
Defibrillator	•	
Access to 12 lead ECG	•	
Access to CPAP driver or High Flow Nasal Cannula Oxygen therapy	•	
Oxygen analyser	•	
Syringe pumps	•	
Infusion pumps	•	
Portable suction unit	•	
Access to chest drain set	•	
Access to cricoidotomy set	•	
Ventilator (capable down to 5kg)	•	
Tracheostomy tubes ( sizes 3 – 6 mm ID)		•
Ophthalmoscope, otoscope, stethoscope	•	
Weighing scales	•	