The Yorkshire and Humber
Paediatric Critical Care
Operational Delivery Network

NHS

Service Evaluation

Emergency Department

Karen Perring August 2018 (v1)

Service Evaluation – assessment document

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Introduction

In December 2015 the Paediatric Intensive Care Society published the 5th Edition Quality Standards for the Care of Critically Ill Children. These standards build on the 2010 standards and also reflect the guidance in 'High Dependency Care for Children – Time to Move On' (RCPCH, 2014) and 'Facing the Future' (RCPCH, 2015). In June 2018 the RCPCH published Facing the Future: Standards for children in emergency care settings. These were developed by the Intercollegiate Committee for Standards for Children and young People in Emergency Care Settings. These standards have been used to form the framework of this Service Evaluation.

The Paediatric Critical Care Minimum Dataset (PCCMDS) is used to define the interventions that map Level 1, 2 and 3 critical care.

Listed below are the interventions that currently map Level 1 Critical Care.

LEVEL 1: BASIC CRITICAL CARE
Airway: Upper airway obstruction requiring nebulised adrenaline
Breathing:
• Apnoea – recurrent
• Oxygen therapy plus continuous pulse oximetry plus ECG monitoring
• Nasal high flow therapy

Circulation:
• Arrhythmia requiring IV anti-arrhythmic therapy

Diagnosis:
• Severe asthma (IV bronchodilator / continuous nebulisers)
• Diabetic ketoacidosis requiring continuous insulin infusion

Other:
• Reduced level of consciousness (GCS 12 or below) **and** hourly (or more frequent) GCS monitoring

Listed below are the interventions that currently map Level 2 Critical Care.

LEVEL 2: INTERMEDIATE CRITICAL CARE

Airway:

- Nasopharyngeal airway
- Care of tracheostomy (first seven days of episode only)

Breathing:

- Non-invasive ventilation (including CPAP and BiPAP)
- Long-term ventilation via a tracheostomy

Circulation:

- >80 ml/kg volume boluses
- Vasoactive infusion (including inotropes and prostaglandin)
- Temporary external pacing
- Cardiopulmonary resuscitation in the last 24 hours

Diagnosis:

- Acute renal failure requiring dialysis or haemofiltration
- Status epilepticus requiring treatment with continuous IV infusion

Monitoring:

- Invasive arterial monitoring
- Central venous pressure monitoring
- Intracranial monitoring / external ventricular drain

This information has been taken from Quality Standards for the Care of Critically Ill Children, PICS, December 2015 and is based on the Paediatric Critical Care Minimum Dataset.

Please note that the standards within this Service Evaluation have been taken from the self assessment tool in the Quality Standards for the Care of Critically Ill Children, 5th Edition, Paediatric Intensive Care Society, December 2015 as well as Facing the Future: Standards for children in emergency care settings RCPCH June 2018.

Demographics

How many paediatric admissions through ED do you have annually?

Do you have a separate children's emergency department? If so, is this open 24/7 ?

If not do you have a designated children's area?

Do you have any qualified children's nurse in your department – how many?

Do you have any PEM Consultants?

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Support for the critically ill child and family Demonstration of compliance – BI= Background Report, Doc =Document, V= visit, MP&S = meeting patients, families & staff							
No.	***Quality standard***	***Notes***	***Demonstration of compliance***	***RAG***	***Comments***	***Standard agreed by Review Team***	***Review comments***
1.	*Child-friendly Environment* Children should be cared for in a defined safe and secure child-friendly environment, with age-appropriate stimulation and distraction activities.	The facility should have visual and, ideally, sound separation from adult patients. More detail of recommendations for the environment in emergency care settings is given in 'Standards for Children and Young People in Emergency Care Settings' (RCPCH, 2012).	Visit				
2.	*Information for Children* Children should be offered age-appropriate information, encouragement and support to enable them to share in decisions about their care. Written information about common conditions should be available.	See below					
3.	*Information for Children and their Families* Information for families should be available covering, at least: a) The child's condition b) How parents can take part in decisions about their child's care	*1 Information should be written in clear, simple language and should be available in formats and languages appropriate to the needs of the patients, including developmentally appropriate information for young people and people with learning disabilities. Information for young*	Visit Doc				

	c) Participation in the delivery of care and presence during interventions d) Support available including access to psychological and financial support e) How to get a drink and food f) Layout of the unit or ward, visiting arrangements including arrangements for children to visit, car parking advice, ward routines and location of facilities within the hospital that families may wish to use g) Relevant support groups and voluntary organisation	*people should meet the 'Quality Criteria for Young People Friendly Health Services' (DH, 2011).* *2 Information may be in paper or electronic/e-learning formats or in the form of a website or other social media. Guidance on how to access information is sufficient for compliance so long as this points to easily available information of appropriate quality. If the information is provided only in individual patient letters then examples will need to be seen by reviewers.* *3 This may be general Hospital-Wide (or equivalent) information. If so, services or clinics which are specific to one condition should be clearly identified. If the information is provided only in individual patient letters then examples of these will need to be available to reviewers.*					
4.	*Discharge Information* On discharge home, children and families should be offered written information about: a. Care after discharge b. Early warning signs of problems and what to do if these occur c. Who to contact for advice and their contact details	*1 As above notes 1 to 3.* *2 Discharge information should be sent electronically to the patient's GP and other relevant healthcare professionals within 24 hours of discharge.*	Visit MP&S				

5.	*Parental Access and Involvement* Parents should: a) Have access to their child at all times except when this is not in the interest of the child and family or of the privacy and confidentiality of other children and their families b) Be informed of the child's condition, care plan and emergency transfer (if necessary) and this information should be updated regularly c) Have information, encouragement and support to enable them fully to participate in decisions about, and in the care of, their child.		Visit MP&S				
6.	*Involving children and families* The service should: a) Have mechanisms for receiving feedback from children and families about the treatment and care they receive b) Have mechanisms for involving children and families in decisions about the organisation of the service c) Have examples of changes made as a result of feedback and involvement of children and families		Visit Doc				

7.	*Additional Support for Families* Families should have access to the following support and information about these services should be available: a) Interfaith and spiritual support b) Social workers c) Interpreters d) Bereavement support e) Patient Advice and Advocacy Services	*Availability' of support services is not defined but should be appropriate to the case mix and needs of the patients.*	Visit MP&S				

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Medical Staffing

No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
8.	*Lead Consultant* A nominated lead consultant should be responsible for staffing, training, guidelines and protocols, governance and for liaison with other services. The lead consultant should undertake regular clinical work within the service for which they are responsible.		Visit				
9.	*Consultant Staffing* a) A consultant who is able to attend the hospital within 30 minutes and who does not have responsibilities to other hospital sites should be available 24/7 b) All consultants should have up to date advanced paediatric resuscitation and life support competences and should undertake CPD of relevance to their work with critically ill and critically injured children c) Every emergency department treating children must be staffed with a PEM consultant with dedicated session time allocated to paediatrics	'Available' means that the consultant can attend if required Facing the Future: Standards for Children in Emergency Care Settings RCPCH June 2018	BI Visit				

No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
10.	*'Middle Grade' Clinician* A 'middle grade' clinician with the following competences should be immediately available at all times: a) Advanced paediatric resuscitation and life support b) Assessment of the ill child and recognition of serious illness and injury c) Initiation of appropriate immediate treatment d) Prescribing and administering resuscitation and other appropriate drugs e) Provision of appropriate pain management f) Effective communication with children and their families g) Effective communication with other members of the multi-disciplinary team, including the on-duty consultant **A clinician with at least Level 1 RCPCH (or equivalent) competences and experience should be immediately available. Doctors in training should normally be**	1 'Immediately available' means able to attend within five minutes. 2 RCPCH competence frameworks are available at: www.rcpch.ac.uk/Training/Competency-Frameworks. A competence framework and evidence of competences is required if this QS is met by use of non-medical staff. 3 Staffing levels needed will depend on the size and layout of the unit, dependency of patients and ward round patterns. Exact staffing ratios will depend on case-mix, availability of nurse specialists and seniority of medical trainees. 4 Junior medical staff should not work in Emergency Departments without direct (physically present) supervision from more senior staff (ST4 or above, or equivalent), (NHS England, 2013).	BI Visit				

	Specialist Trainee 4 (ST4) or above. Larger hospitals with several wards or departments caring for children will require more than one clinician with these competences on site 24/7.						

Nurse Staffing

No.	*Quality standard*	*Notes*	*Demonstration of compliance*	*RAG*	*Comments*	*Standard agreed by Review Team*	*Review comments*
11.	*Lead Nurse* A nominated lead nurse should be responsible for staffing, training, guidelines and protocols, governance and for liaison with other services. The lead nurse should be a senior children's nurse. The lead nurse should undertake regular clinical work within the service for which they are responsible.		Visit				
12.	*Staffing Levels:* a. Every emergency department treating children must be staffed with two registered children's nurses. b. A minimum of two children's nurses per shift in dedicated emergency departments	Facing the Future : Standards for Children in Emergency Care Settings RCPCH June 2018	Visit BI DOC				

	must possess recognisable post registration trauma and emergency training. c. Every emergency department treating children must enable their staff to attend annual learning events that are specific to paediatric emergency medicine. d. Every emergency department treating children must have a member of staff with APLS or equivalent training on duty at all times. e. Every emergency department treating children must have their qualified staff trained in infant and child basic life support.						

Other Staffing

No.	*Quality standard*	*Notes*	*Demonstration of compliance*	*RAG*	*Comments*	*Standard agreed by Review Team*	*Review comments*
13.	The following staff should be available: a) Appropriately qualified staff to provide support for play, mental stimulation and distraction during procedures (7/7) b) Access to dietetic service (5/7) c) Access to a liaison health worker for children with mental health needs (7/7) d) Access to staff with competences in psychological support (at least 5/7) e) On-call access to pharmacy and physiotherapy services able to support the care of children (24/7)		MP&S Visit				
14.	Trauma Team Emergency Departments receiving children with trauma should have a Trauma Team immediately available at all times, including: a. Team Leader b. Emergency Department senior decision-maker	1 This QS applies only to Emergency Departments accepting children with Trauma. 2 The Team Leader may be a member of the Team for the first 30 minutes. Consultants in Emergency Medicine, Paediatrics, General Surgery and Trauma and Orthopaedics should be available within 30 minutes. 3 The Emergency Department senior					

	c. Clinician with Level 1 RCPCH competences d. General Surgeon e. Orthopaedic Surgeon f. Anaesthetist with competences in advanced airway management (QS HW-204)	decision-maker should be a doctor of ST4 or above.					
15.	*Safeguarding Training* All staff involved with the care of children should: a) Have training in safeguarding children appropriate to their role, as agreed by the Hospital and local Safeguarding Board b) Be aware of who to contact if they have concerns about safeguarding issues c) Work in accordance with latest national guidance on safeguarding children and the safeguarding policy of the Hospital and local Safeguarding Board		Doc				

Facilities and Equipment

No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
16.	*Resuscitation Equipment* An appropriately designed and equipped area, or adequate mobile equipment, for resuscitation and stabilisation of critically ill children of all ages should be available. Drugs and equipment should be checked in accordance with local policy.	A list of drugs and equipment needed for paediatric resuscitation is available on The Paediatric Intensive Care Society website http://picsociety.uk/	Visit				
17.	*'Grab Bag'* Appropriate drugs and equipment for in-hospital and time-critical transfers should be immediately available and checked in accordance with local policy.		Visit				
18.	*Imaging Services* 24 hour on site access to imaging services should be available including ultrasound and CT scanning, with reporting available within one hour. Arrangements for access to MRI should be in place. If staff with competences in reporting imaging of children are not available 24/7 then the Hospital should have arrangements for review of imaging by a paediatric radiologist	1. Availability within one hour applies only to services receiving critically ill and critically injured children and is not applicable to services receiving elective admissions only. 2. Arrangements for access to MRI could include on site access or access through network arrangements with another hospital.	BI				

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No.	*Quality standard*	*Notes*	*Demonstration of compliance*	*RAG*	*Comments*	*Standard agreed by Review Team*	*Review comments*
19.	*'Point of Care' Testing* 'Point of care' testing for blood gases, glucose, electrolytes and lactate should be easily available.	'Easily available' means within the unit or department or nearby.	Visit BI				
20.	*Facilities for Children* At least one clinical cubicle or trolley space for every 5,000 annual child attendances should be dedicated to the care of children.						

Guidelines, policies & procedures

No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
21.	*Initial Assessment* A protocol should be in use which ensures a brief clinical assessment within 15 minutes of arrival, including a pain score (where appropriate), and a system of prioritisation for full assessment if waiting times for full assessment exceed 15 minutes.						
22.	*Clinical Guidelines* The following clinical guidelines should be in use: a) All treatment of all major conditions, including: i. acute respiratory failure (including bronchiolitis and asthma) ii. sepsis (including septic shock and meningococcal infection) iii. management of diabetic ketoacidosis iv. seizures and status epilepticus v. trauma, including	1. Guidelines should be clear on the roles and responsibilities of all members of the multi-disciplinary team, including anaesthetic services. 2. Guidelines should include actions to prevent / prepare for deterioration and may link with 'early warning' guidelines. 3. Where relevant, guidelines should be specific about the care of children with developmental delay, multiple disabilities or co-morbidities. 4. Guidelines on the treatment of trauma should be based on regional trauma guidelines.	BI Doc Visit				

	traumatic brain injury, spinal injury and rehabilitation of children following trauma (if applicable) vi. burns and scalds vii. cardiac arrhythmia viii. upper airway obstruction b) Management of acutely distressed children, including use of restraint c) Drug administration and medicines management d) Pain management e) Procedural sedation and analgesia f) Infection control and antibiotic prescribing g) Tissue viability, including extravasation						
23.	*Paediatric Early Warning System* A system to provide early warning of deterioration of children should be in use. The system should cover observation, monitoring and escalation of care.		Doc Visit				
24.	*Resuscitation and Stabilisation* Hospital-wide protocols for resuscitation and stabilisation should be in use, including:		Doc				

	a) Alerting the paediatric resuscitation team b) Arrangements for accessing support for difficult airway management c) Stabilisation and ongoing care d) Care of parents during the resuscitation of a child						
25.	*Paediatric Advice* Guidelines on accessing advice from the local paediatric service and local paediatric critical care service should be in use in units where children are not under the care of a paediatrician.	This QS applies to Emergency Departments, elective surgery wards and any other units where children are not under the care of a paediatrician. This QS is not applicable to services where care is managed by paediatric medical and nursing staff.					
26.	*Trauma Clinical Guidelines* Guidelines should be in use covering the care of children with trauma, including: a. Immediate airway management b. Haemorrhage control and massive transfusion c. Chest drain insertion	1 This QS applies to all Emergency Departments, including those accepting only 'walk-in' children with trauma. 2 Guidelines on immediate airway management of children with trauma may be combined with the resuscitation and stabilisation guidelines (QS ED-503).					

Transfer Guidelines

No.	*Quality standard*	*Notes*	*Demonstration of compliance*	*RAG*	*Comments*	*Standard agreed by Review Team*	*Review comments*
27.	*PCC Transfer Guidelines* Guidelines on referral to a Specialist Paediatric Transport Service should be in use, covering at least: a) Accessing advice from a Specialist Paediatric Transport Service and providing full clinical information b) Ensuring decisions on whether a child needs to be transferred are taken by the appropriate local consultant together with the Specialist Paediatric Transport Service c) Local guidelines on the maintenance of paediatric critical care until the child's condition improves or the SPTP arrives. These guidelines should stipulate the location/s in which children may be maintained	Although the Specialist Paediatric Transport Service will give advice, the management of the child remains the responsibility of the referring team until the child is transferred to the Specialist Paediatric Transport Service. It is also expected that the local paediatrician and anaesthetist will remain involved with the care of the child and support the work of the Specialist Paediatric Transport Service while on-site.	MP&S Doc				

No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
28.	*In-hospital Transfer Guidelines* Guidelines on transfer of seriously ill children within the hospital (for example, to or from imaging or theatre) should be in use. The guidelines should specify the escort arrangements and equipment required.		Doc MP&S				
29.	*Time-Critical Transfer Guidelines* Guidelines should be in place for situations where emergency transfer is time-critical and waiting for the SPTS to arrive may introduce unsafe delay, for example, severe head injury, intracranial bleeding, severe thoracic vascular trauma, burns and some intra-abdominal emergencies. The guidelines should include: a) Securing advice from the Specialist Paediatric Transport Service	1. Information about ambulance services should include contact information, vehicle specification (road ambulance) and response times. 2. All children, equipment and staff in the ambulance should be restrained during transfer in accordance with European CEN 1789/2000 Standard. Age-appropriate child restraint devices should either be available either within the department or there should be an arrangement with the ambulance service for such devices to be provided.	Doc MP&S				

No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
29. *contd*	b) Escort team of at least two clinical staff with appropriate training and experience. The referring consultant and senior nurse on duty should judge the appropriateness of the escorts who would normally be senior clinicians with experience and/or training in 1) care of the critically ill child, 2) emergency transfer and 3) advanced airway management c) Indemnity for escort team d) Availability of drugs and equipment, checked in accordance with local policy e) Arrangements for emergency transport with a local ambulance service and the air ambulance f) Arrangements for ensuring restraint of children, equipment and staff during transfer.	3. Equipment used during transport should be secured and there should be no loose items in the rear cabin. 4. The advice of the Paediatric Critical Care Operational Delivery Network and the Specialist Paediatric Transport Service for the local population may be helpful in developing local guidelines.					

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No.	Quality standard	Notes	Demonstration of compliance	RAG	Comments	Standard agreed by Review Team	Review comments
30.	**Operational Policy** The service should have an operational policy covering at least: a. Individualised management plans are accessible for children who have priority access to the service (where applicable) b. Informing the child's GP of their attendance / admission c. Level of staff authorised to discharge children d. Arrangements for consultant presence during 'times of peak activity' (7/7) e. Servicing and maintaining equipment, including 24 hour call out where appropriate	1 Individualised management plans may be in the form of patient passports. 2 Notifying other relevant members of the primary health care team is desirable. 3 Operational policies should be based on the inclusion and exclusion criteria, interventions and key performance indicators for which the service is commissioned (QS C-603). Operational policies should be clear about the care of young people aged 16 to 18 and pre-term babies discharged from neonatal units. 4 RCPCH (2015) recommends that units work towards consultant presence 12 hours a day, seven days a week.					

Data collection and clinical governance

No.	*Quality standard*	*Notes*	*Demonstration of compliance*	*RAG*	*Comments*	*Standard agreed by Review Team*	*Review comments*
31.	*Review and Learning* The service should have appropriate multi-disciplinary arrangements for review of, and implementing learning from, positive feedback, complaints, morbidity, mortality, transfers and clinical incidents and 'near misses'.	These arrangements should include feedback to operational staff and should link with Hospital-Wide governance arrangements.	Doc BI				
32.	*Data Collection* All emergency departments treating children collect data that is used to improve services locally and to benchmark performance nationally.	Facing the Future : Standards for Children in Emergency Care Settings RCPCH June 2018	Doc Visit				
33.	*Document Control* All policies, procedures and guidelines and should comply with Hospital document control procedures.		Doc				

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