WM QRS West Midlands Quality Review Service

NHS

West Midlands Paediatric Critical Care Network

Care of Critically Ill & Critically Injured Children Quality Review Visit

The Shrewsbury and Telford Hospital NHS Trust

Visit Date: 13th September 2018 Report Date: November 2018

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INTRODUCTION

This short report presents the findings of the review of Critically Ill and Critically Injured Children that took place on 13th September 2018. The review visit was commissioned by the West Midlands Paediatric Critical Care Network (WMPCCN) on behalf of commissioners and NHS England who have responsibility for making recommendations on future provision for the delivery of paediatric critical care. This review programme links to both a National Paediatric Critical Care Review; and a West Midlands Paediatric Critical Care CQUIN. The CQUIN outlines a requirement for all West Midlands children's services to be assessed against the WMQRS /Paediatric Intensive Care Society (2016) Standards for the Care of Critically Ill Children (v.5) by July 2017.

The purpose of the visit was to validate the self-assessments made by the acute Trust and review the pathway for critically ill children attending the Emergency Department and children's assessment units through to inpatient and level 2 high dependency unit areas. As part of the WMPCCN programme, information was also gathered about existing capacity to provide paediatric high dependency care at a local level and the plans that may be required to deliver paediatric high dependency care nearer to the patient's home in the future. Only a select number of Quality Standards were reviewed during this visit. The Quality Standards identified were agreed by the WMPCCN as being important to provide the information required to inform commissioners as part of the National CQUIN for 2017/18. The review visit consisted of a half-day visit, during which reviewers looked at evidence against the self-assessment submitted, met with the lead team for children's services and viewed facilities. This review programme was therefore not as in-depth as the Critically Ill and Critically Injured Children peer review programmes undertaken across the West Midlands in previous years, but was designed to provide specific assurances.

The aim of the standards and the review programme is to help providers and commissioners of services to improve clinical outcomes and service users' and carers' experiences by improving the quality of services. The report also gives external assurance of the care, which can be used as part of the organisations' Quality Accounts. For commissioners, the report gives assurance of the quality of services commissioned and identifies areas where developments may be needed.

The report reflects the situation at the time of the visit. The text of this report identifies the main issues raised during the course of the visit. Any immediate risks identified include the Trust's and WMQRS's response to any actions taken to mitigate the risk. Appendix 1 lists the visiting team that reviewed the services at The Shrewsbury and Telford Hospital NHS Trust**.** Appendix 2 contains the details of compliance with each of the standards, and the percentage of standards met.

This report describes services provided or commissioned by the following organisations:

- The Shrewsbury and Telford Hospital NHS Trust
- NHS Shropshire Clinical Commissioning Group
- NHS Telford and Wrekin Clinical Commissioning Group

Most of the issues identified by quality reviews can be resolved by providers' and commissioners' own governance arrangements. Many can be tackled by the use of appropriate service improvement approaches; some require commissioner input. Individual organisations are responsible for taking action and monitoring this through their usual governance mechanisms. The lead commissioner for the service concerned is responsible for ensuring action plans are in place and monitoring their implementation, liaising, as appropriate, with other commissioners, including commissioners of primary care. The lead commissioners in relation to this report are NHS Shropshire and NHS Telford and Wrekin Clinical Commissioning Groups.

About West Midlands Quality Review Service

WMQRS is a collaborative venture between NHS organisations in the West Midlands to help improve the quality of health services by developing evidence-based Quality Standards, carrying out developmental and supportive quality reviews - often through peer review visits, producing comparative information on the quality of services and providing development and learning for all involved.

Expected outcomes are better quality, safety and clinical outcomes, better patient and carer experience, organisations with better information about the quality of clinical services, and organisations with more confidence and competence in reviewing the quality of clinical services. More detail about the work of WMQRS is available on www.wmqrs.nhs.uk

Acknowledgments

West Midlands Quality Review Service and the West Midlands Paediatric Critical Care Network would like to thank the staff and service users and carers of The Shrewsbury and Telford Hospital NHS Trust for their hard work in preparing for the review and for their kindness and helpfulness during the course of the visit. Thanks are also due to the visiting team and their employing organisations for the time and expertise they contributed to this review.

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Care of Critically Ill and Critically Injured Children

Trust Wide

General Comments and Achievements

Children's services had been reconfigured in September 2014 leading to the creation of a Women's and Children's Centre at the Princess Royal Hospital. At the time of the visit a consultation process across the health economy had just concluded, which looked at centralising acute service including children's services on one hospital site and providing planned elective care on the other. At both sites there were good working relationships with the anaesthetic services.

Good Practice

1. Paediatric resuscitation information, equipment and layout was consistent in all areas, which made it safer and easier for staff who were not familiar with the area to locate equipment and information quickly.
2. Patient pathways were clearly defined and very comprehensive and covered operational information around stabilisation and transfer of children within and outside the Trust. Guidance was also in place for when the paediatric assessment unit (PAU) was open and when it was closed. Reviewers were impressed with the flowcharts added as appendices within each policy which were very clear and informative.

Immediate Risks: See the Children's Emergency Department – Royal Shrewsbury Hospital section of the report

Concerns

1. **Hospital-wide group**

   A single group that was responsible for the coordination and development of the care of critically ill and critically injured children and that had the appropriate membership was not in place. No meeting had taken place since May 2017. The group did not include the nominated board lead for children, as this responsibility had been delegated. Reviewers were concerned that a strategic group that included all the clinical leads was not in place, especially in view of children's services being provided across two hospital sites, and of the need to have a strategic clinical view on future service development.

Further Consideration

1. Reviewers considered that the paediatric warning score guidance may benefit from review to include 'sepsis 6', and the option to include any parental or staff concerns.

CHILDREN'S EMERGENCY DEPARTMENT - ROYAL SHREWSBURY HOSPITAL

Good Practice

1. A protocol that ensured that a brief clinical assessment would be undertaken within 15 minutes of arrival was in place, and data showed that the standard was met 99% of the time.

Immediate Risks[1]

1. **Availability of staff with advanced paediatric resuscitation and life support training and level 1 Royal College of Paediatric and Child Health (RCPCH) competences**

   At the time of the review, the Emergency Department at the Royal Shrewsbury Hospital was very reliant on locum middle grade staff to meet the service needs, and there was no process in place to assure the Trust that locum middle grade doctors working in the Emergency Department out of hours would have up to date advanced paediatric resuscitation and life support training. All permanent middle grade doctors in the Emergency Department had up to date advanced paediatric resuscitation and life support training.

   In addition, paediatric staff were only available 9am to 10pm Monday to Friday and 12 noon to 10pm on Saturdays and Sundays. A registered healthcare professional with level 1 RCPCH competences was not always available at Royal Shrewsbury Hospital after 10pm when paediatric staff were not on site.

   Reviewers considered that a child could arrive and need resuscitation after 10pm and that a member of staff with appropriate competences to lead the resuscitation might not be available.

   This issue was also identified as an immediate risk during the previous review of critically ill and critically injured children undertaken in 2015.

Concerns: None

Further Consideration: None

CHILDREN'S EMERGENCY DEPARTMENT - PRINCESS ROYAL HOSPITAL

Good Practice

1. A protocol that ensured that a brief clinical assessment would be undertaken within 15 minutes of arrival was in place and data showed that the standard was met 99% of the time.

Further Consideration

1. There was no training or competency framework in place for Emergency Department staff providing bedside care.

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[1] **Trust Response:** The pathway for an injured or critically ill child presenting at the Royal Shrewsbury Hospital will be, for the 'out of hours' period: assessment by a middle tier emergency department doctor with paediatric resuscitation competency, support as required by the on - site resuscitation team including senior resident Anaesthetist/ Intensivist. Consultant paediatrician on-call with requirement to be present on scene in no more than 30 minutes. In addition, the Trust commits to employing only locums who have paediatric resuscitation competences. In the rare situation – given this night-time reconfiguration of the only available locum not having paediatric resuscitation competences either an ED consultant or a consultant paediatrician will sleep in on site.
WMQRS Response: The initial action in this is an interim arrangement on a journey to a robust plan which will take time to implement. We agree that this provides a good level of mitigation of the risk while you implement a single site model of care for both Children's and ED services. We agree that once this new model of care is implemented, this will fully mitigate the risk. In the meantime, the actions described in your letter, once implemented will provide an effective initial response.

Paediatric Assessment Unit (PAU), Inpatient Ward and Paediatric High Dependency Care

General Comments and Achievements

Reviewers found an enthusiastic team who were committed to good patient care and were working hard to provide a high-quality service for children and young people. The team were forward looking and were keen to develop. Reviewers saw that the facilities were very good

High dependency care was provided in the unit; and at the time of the visit an infant with a stable tracheostomy had been transferred from PICU and was being cared for by the team. Four bed spaces were identified and equipped to care for children with level one high dependency needs.

Good Practice

1. See also Trust-wide section of the report
2. Access to the medication cupboard keys had been centralised by using a key safe (Trakka system). This enabled staff to access medication quickly rather than spending time looking for the nurse in charge. Evaluation of the pilot had been extremely positive, and the practice had been extended initially within the Women's and Children's Care Group and then Trust-wide.

Immediate Risks: None

Further Consideration

1. The nurse competence framework would benefit from review to include more specific detail for achievement of HDU competences. Reviewers suggested that the unit should consider adopting a framework such as the Royal College of Paediatrics and Child Health *'High Dependency Care for Children, Time to Move on'* recommendations which could also be amended for use locally. The format could be used to include competences for other staff
2. Ear Nose and Throat (ENT) services were based on site and could provide advice to the team when required. Reviewers suggested that formalising arrangements for ENT support would be beneficial especially as the unit was caring for an infant with a stable tracheotomy.
3. The service did not have any key performance indicators (KPIs) agreed. Reviewers were told that the indicators agreed previously had been set to a level that was not achievable and that they were in the process of being reviewed. Reviewers did, however, believe that many of the KPIs previously used were appropriate performance indicators.
4. Separate operational polices were in place for the paediatric inpatient areas and the high dependency unit. Reviewers considered that it may be more sensible to have a single operational policy. The policy could then include more detail about the HDU in terms of timeframes for assessment, review, observation and monitoring, and the criteria for step up and step down between the HDU and the ward.

Future Strategy

As part of the visit the WMPCCN were keen to hear from staff about their views on the future delivery of critical care for children across the region. The Trust team and reviewers identified several areas for consideration by both the Trust and the WMPCCN in the designation and provision of level 2 HDU care across the West Midlands.

1. The team was, at the time of the visit, caring for a child with a stable tracheostomy. Good support had been available from the staff from the paediatric intensive care unit at the Royal Stoke Hospital.
2. The team were keen to consider delivering more complex level 2 care, which would require appropriate commissioning, capital and workforce investment.

3. The WMPCCN should work with providers to develop medical and nursing competences for caring for patients on acute Bilevel Positive Airway Pressure ventilation (BiPAP).

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APPENDIX 1 MEMBERSHIP OF VISITING TEAM

Visiting Team		
Ally Davies	Network Lead/BWC Transformation Manager	Birmingham Women's and Children's NHS Foundation Trust
Sue Ellis	Lead Nurse Paediatrics & Neonatology	University Hospitals Coventry & Warwickshire NHS Trust
Dr Sarah Griffiths	Consultant Paediatrician	University Hospitals Coventry & Warwickshire NHS Trust
Alison Warren	Clinical Matron for Children and Young People's Services & Nursing Lead for Resuscitation	The Royal Orthopaedic Hospital NHS Foundation Trust

WMQRS Team		
Sarah Broomhead	Assistant Director	West Midlands Quality Review Service

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APPENDIX 2 COMPLIANCE WITH THE QUALITY STANDARDS

Analyses of percentage compliance with the Quality Standards should be viewed with caution, as they give the same weight to each of the Quality Standards. Also, the number of Quality Standards applicable to each service varies depending on the nature of the service provided. Percentage compliance also takes no account of 'working towards' a particular Quality Standard. Reviewers often comment that it is better to have a 'No, but', where there is real commitment to achieving a particular standard, than a 'Yes, but' where a 'box has been ticked' but the commitment to implementation is lacking. With these caveats, table 1 summarises the percentage compliance for each of the services reviewed.

Table 1 - Percentage of Quality Standards met

Details of compliance with individual Quality Standards can be found in a separate document.

Service	Number of applicable QS	Number of QS met	% met
Hospital-wide	10	7	70
Emergency Department	20	16	80
Children's Assessment Unit	22	19	86
Integrated IP & L1PCCU	29	25	86
Health Economy	**81**	**67**	**83**

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HOSPITAL-WIDE

Ref	Standard	Met?	Reviewer's comments
HW-201	**Board-Level Lead for Children** A Board-level lead for children's services should be identified.	Y	
HW-202	**Clinical Leads** The Board-level lead for children's services should ensure that the following leads for the care of children have been identified: a. Lead consultants and nurses for each of the areas where children may be critically ill (QS **-201) b. Lead consultant for paediatric critical care c. Lead consultant for surgery in children (if applicable) d. Lead consultant for trauma in children (if applicable) e. Lead anaesthetist for children (QS A-201) f. Lead anaesthetist for paediatric critical care (QS A-202) g. Lead GICU consultant for children (QS A-203) (if applicable) h. Lead consultant/s and lead nurse/s for the Specialist Paediatric Transport Service (QS T-201) (if applicable) i. Lead consultant and lead nurse and for safeguarding children j. Lead allied health professional for the care of critically ill children	Y	
HW-203	**Hospital Wide Group** Hospitals providing hospital services for children should have a single group responsible for the coordination and development of care of critically ill and critically injured children. The membership of this group should include all nominated leads (QS HW-202) and the Resuscitation Officer with lead responsibility for children. The accountability of the group should include the Hospital Lead for children's services (QS HW-201). The relationship of the group to the Trust's mechanisms for safeguarding children and clinical governance issues relating to children should be clear.	N	The hospital wide group had not met since May 2017. There was limited engagement from the nominated executive lead.

Ref	Standard	Met?	Reviewer's comments
HW-204	**Paediatric Resuscitation Team** A paediatric resuscitation team should be immediately available at all times, comprising at least three people: a. A Team Leader with up to date advanced paediatric resuscitation and life support knowledge and competences and at least Level 1 RCPCH (or equivalent) competences (QS PM-203) b. A second registered healthcare professional with up to date advanced paediatric resuscitation and life support competences An anaesthetist, or other practitioner, with up to date competences in advanced paediatric resuscitation and life support and advanced airway management	N	A team leader with level 1 RCPCH competences was not always available out of hours at RSH and reliant on the middle grad anaesthetic clinician having advanced paediatric life support competences. This QS was met at PRH.
HW-205	**Consultant Anaesthetist 24 Hour Cover** A consultant anaesthetist with up to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management who is able to attend the hospital within 30 minutes and does not have responsibilities to other hospital sites should be available 24/7.	Y	
HW-206	**Other Clinical Areas** Staff in other clinical areas where children may be critically ill, such as imaging and paediatric out-patient departments, should have basic paediatric resuscitation and life support training.	Y	Children who were deemed critically ill were always escorted by a trained member of the paediatric team. Imaging staff were in the process of completing training in basic paediatric resuscitation and life support.
HW-401	**Paediatric Resuscitation Team – Equipment** The paediatric resuscitation team should have immediate access to appropriate drugs and equipment which are checked in accordance with local policy.	Y	
HW-501	**Resuscitation and Stabilisation** Protocols should be in use covering resuscitation and stabilisation, including: 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	Y	Care of parents during the resuscitation would benefit from being more explicit in terms of roles and responsibilities. 'b' Royal College of Anaesthetist guidance on difficult airway management was in use.

Ref	Standard	Met?	Reviewer's comments
HW-598	**Trust-Wide Guidelines** The following Trust-Wide guidelines should be in use: a. Consent b. Organ and tissue donation c. Palliative care d. Bereavement e. Staff acting outside their area of competence covering: f. Exceptional circumstances when this may occur g. Staff responsibilities h. Reporting of event as an untoward clinical incident i. Support for staff	N	Paediatric Palliative guidance was in the process of being developed. Guidance covering staff acting outside their area of competence was not yet in place. Guidance was in place for all other aspects of the QS.
HW-602	**Paediatric Critical Care Operational Delivery Network Involvement** At least one representative from the Trust should attend each meeting of the Paediatric Critical Care Operational Delivery Network. Information about the work of the network should be disseminated to all staff involved in the provision of critical care for children	Y	

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EMERGENCY DEPARTMENT

Ref	Standard	Met?	Reviewer's comments
ED-201	**Lead Consultant and Lead Nurse** A nominated lead consultant and 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 consultant and lead nurse should undertake regular clinical work within the service for which they are responsible.	Y	
ED-202	**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	N	It was not clear if all locum consultants would have advanced paediatric resuscitation and life support competences. One consultant paediatrician did not have up to date advanced paediatric resuscitation and life support competences (expired July with training booked for October) All Trust Emergency Department Consultants did have up to date advanced paediatric resuscitation and life support competences.

Ref	Standard	Met?	Reviewer's comments
ED-203	**'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 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.	N	Both emergency departments at RSH and PRH utilised locum middle- grade clinicians and reviewers were not assured that they would all have advanced paediatric resuscitation and life support competences. At PRH there was always 24/7 support from Paediatric Department
ED-206	**Competence Framework and Training Plan – Staff Providing Bedside Care** A competence framework and training plan should ensure that all staff providing bedside care have or are working towards, and maintain, competences appropriate for their role in the service including: a. Paediatric resuscitation: All staff should have basic paediatric resuscitation and life support competences and the service should have sufficient staff with advanced paediatric resuscitation and life support competences to achieve at least the minimum staffing levels (QS ED-208) and expected input to the paediatric resuscitation team (QS HW-204) b. Care and rehabilitation of children with trauma (if applicable) c. Care of children needing surgery (if applicable) d. Use of equipment as expected for their role e. Care of children with acute mental health problems	N	There was no training or competency framework in place for Emergency Department staff providing bedside care. At RSH a nurse with appropriate competences was not always on duty.

Ref	Standard	Met?	Reviewer's comments
ED-207	**Staffing Levels: Bedside Care** Nursing and non-registered health care staffing levels should be appropriate for the number, dependency and case-mix of children normally cared for by the service and the lay-out of the unit. An escalation C12policy should show how staffing levels will respond to fluctuations in the number and dependency of patients. If staffing levels are achieved through flexible use of staff (rather than rostering), achievement of expected staffing levels should have been audited. Before starting work in the service, local induction and a review of competence for their expected role should be completed for all agency, bank and locum staff. The following minimum nurse staffing levels should be achieved: a. At least one nurse with up to date advanced paediatric resuscitation and life support competences on each shift b. At least one registered children's nurses on duty at all times in each area	N	There were insufficient children's trained nurses to cover the emergency department 24/7.
ED-209	**Other Staffing** The following staff should be available: a. Appropriately qualified staff to provide support for play, mental stimulation and distraction during procedures (7/7) b. On-call access to pharmacy and physiotherapy services able to support the care of children (24/7) c. Access to dietetic service (at least 5/7) d. Access to a liaison health worker for children with mental health needs (7/7) e. Access to staff with competences in psychological support (at least 5/7)	Y	'a' was not applicable as both EDs saw less than 16,000 children per year.
ED-211	**ED Liaison Paediatrician** A nominated paediatric consultant should be responsible for liaison with the nominated Emergency Department consultant (QS ED-201).	Y	
ED-212	**ED Sub-speciality Trained Consultant** Emergency Departments seeing 16,000 or more child attendances per year should have a consultant with sub-specialty training in paediatric emergency medicine.	N/A	

Ref	Standard	Met?	Reviewer's comments
ED-301	**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.	Y	
ED-401	**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.	Y	
ED-402	**Grab Bag'** Appropriate drugs and equipment for in-hospital and time-critical transfers should be immediately available and checked in accordance with local policy.	Y	
ED-501	**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.	Y	The Manchester Triage Tool was in use in both emergency departments.
ED-502	**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.	Y	
ED-503	**Resuscitation and Stabilisation** Hospital-Wide protocols for resuscitation and stabilisation should be in use, including: 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	Y	As See QS HW 501
ED-504	**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.	Y	

Ref	Standard	Met?	Reviewer's comments
ED-505	**Clinical Guidelines** The following clinical guidelines should be in use: **a.** 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 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	Y	
ED-506	**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	Y	
ED-507	**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.	Y	

Ref	Standard	Met?	Reviewer's comments
ED-508	**Inter-hospital Transfer Guidelines** Guidelines on transfer of children between hospitals or between hospital sites should be in use covering at least: a. Types of patients transferred b. Composition and expected competences of the escort team c. Drugs and equipment required d. Restraint of children, equipment and staff during transfer e. Monitoring during transfer	Y	
ED-509	**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 (QS ED-506) 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 a) care of the critically ill child, b) emergency transfer and c) advanced airway management c. Indemnity for escort team d. Availability of drugs and equipment, checked in accordance with local policy (QS ED-402) 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	Y	Documentation of indemnity for escort team would benefit from being clearer in the policy. Arrangements for ensuring restraint of children, equipment and staff during transfer was included in the Transfer of Children Policy.
ED-798	**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'.	Y	

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Children's Assessment Service

Ref	Standard	Met?	Reviewer's comments
CA-201	**Lead Consultant and Lead Nurse** A nominated lead consultant and 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 consultant and lead nurse should undertake regular clinical work within the service for which they are responsible.	Y	
CA-202	**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	Y	One consultant paediatrician did not have up to date advanced paediatric resuscitation and life support competences (expired July with training booked for October)
CA-203	**'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 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.	Y	

Ref	Standard	Met?	Reviewer's comments
CA-206	**Competence Framework and Training Plan – Staff Providing Bedside Care** A competence framework and training plan should ensure that all staff providing bedside care have or are working towards, and maintain, competences appropriate for their role in the service including: a. Paediatric resuscitation: All staff should have basic paediatric resuscitation and life support competences and the service should have sufficient staff with advanced paediatric resuscitation and life support competences to achieve at least the minimum staffing levels (QS CA-208) and expected input to the paediatric resuscitation team (QS HW-204) b. Care and rehabilitation of children with trauma (if applicable) c. Care of children needing surgery (if applicable) d. Use of equipment as expected for their role **e.** Care of children with acute mental health problems	Y	
CA-207	**Staffing Levels: Bedside Care** Nursing and non-registered health care staffing levels should be appropriate for the number, dependency and case-mix of children normally cared for by the service and the lay-out of the unit. An escalation policy should show how staffing levels will respond to fluctuations in the number and dependency of patients. If staffing levels are achieved through flexible use of staff (rather than rostering), achievement of expected staffing levels should have been audited. Before starting work in the service, local induction and a review of competence for their expected role should be completed for all agency, bank and locum staff. The following minimum nurse staffing levels should be achieved: a. At least one nurse with up to date advanced paediatric resuscitation and life support competences on each shift **b.** At least two registered children's nurses on duty at all times in each area	Y	

Ref	Standard	Met?	Reviewer's comments
CA-209	**Other Staffing** The following staff should be available: a. Appropriately qualified staff to provide support for play, mental stimulation and distraction during procedures (7/7) b. On-call access to pharmacy and physiotherapy services able to support the care of children (24/7) c. Access to dietetic service (at least 5/7) d. Access to a liaison health worker for children with mental health needs (7/7) **e.** Access to staff with competences in psychological support (at least 5/7)	Y	
CA-301	**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.	Y	Access to CT and MRI was in place 24/7.
CA-401	**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.	Y	
CA-402	**'Grab Bag'** Appropriate drugs and equipment for in-hospital and time-critical transfers should be immediately available and checked in accordance with local policy.	Y	
CA-406	**'Point of Care' Testing** 'Point of care' testing for blood gases, glucose, electrolytes and lactate should be easily available.	Y	
CA-501	**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.	N	At the time of the visit initial assessment was within 30 mins as a new triage system was being piloted.
CA-502	**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.	Y	

Ref	Standard	Met?	Reviewer's comments
CA-503	**Resuscitation and Stabilisation** Hospital-Wide protocols for resuscitation and stabilisation should be in use, including: 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	Y	As See QS HW 501.
CA-504	**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.	N/A	
CA-505	**Clinical Guidelines** The following clinical guidelines should be in use: **All:** **a.** 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 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 h. Nasal high flow therapy (if used) **i.** Management of children undergoing surgery (if applicable)	Y	

Ref	Standard	Met?	Reviewer's comments
CA-506	**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	Y	
CA-507	**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.	Y	
CA-508	**Inter-hospital Transfer Guidelines** Guidelines on transfer of children between hospitals or between hospital sites should be in use covering at least: a. Types of patients transferred b. Composition and expected competences of the escort team c. Drugs and equipment required d. Restraint of children, equipment and staff during transfer **e.** Monitoring during transfer	Y	

Ref	Standard	Met?	Reviewer's comments
CA-509	**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 (QS CA-506) 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 a) care of the critically ill child, b) emergency transfer and c) advanced airway management c. Indemnity for escort team d. Availability of drugs and equipment, checked in accordance with local policy (QS CA-402) 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	Y	Documentation of indemnity for escort team would benefit from being clearer in the policy. Arrangements for ensuring restraint of children, equipment and staff during transfer was included in the Transfer of Children Policy.

Ref	Standard	Met?	Reviewer's comments
CA-601	**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 f. Arrangements for a consultant-led rapid access service which can see children within 24 hours of referral g. Arrangements for admission within four hours of the decision to admit h. Types of patient admitted i. Review by a senior clinician within four hours of admission j. Review by a consultant within 14 hours of admission and at least two consultant-led clinical handovers every 24 hours k. Handover of patients at each change of responsible consultant, non-consultant medical staff, nursing staff and other staff **l.** Discussion with a senior clinician prior to discharge	N	The operational and HDU polices included 'b',c and 'h' but no other aspects as required by the QS. Review by a consultant within 14 hours of admission and at least two consultant-led clinical handovers every 24 hours ('j') was not compliant on Saturdays and Sundays.
CA-703	**Audit and Quality Improvement** The service should have a rolling programme of audit, including at least: a. Audit of implementation of evidence based guidelines (QS CA-500s) b. Participation in agreed national and network-wide audits **c.** Use of the 'Urgent and Emergency Care Clinical Audit Toolkit' to review individual clinical consultations	Y	
CA-704	**Key Performance Indicators** Key performance indicators should be reviewed regularly with Hospital (or equivalent) management and with commissioners.	N	KPIs had been agreed but shown to be unrealistic so were in the process of being reviewed, however reviewers considered that many were appropriate performance indicators.

Ref	Standard	Met?	Reviewer's comments
CA-798	**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'.	Y	

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INTEGRATED IN-PATIENTS & L1 PAEDIATRIC CRITICAL CARE

Ref	Standard	Met?	Reviewer's comments
L1-101	**Child-friendly Environment** Children should be cared for in a defined safe and secure child-friendly environment, with age-appropriate stimulation and distraction activities.	Y	
L1-102	**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	Y	
L1-201	**Lead Consultant and Lead Nurse** A nominated lead consultant and 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 consultant and lead nurse should undertake regular clinical work within the service for which they are responsible.	Y	
L1-202	**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	Y	One consultant paediatrician did not have up to date advanced paediatric resuscitation and life support competences (expired July with training booked for October)

Ref	Standard	Met?	Reviewer's comments
L1-203	**'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 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.	Y	
L1-205	**Medical Staff: Continuity of Care** Consultant rotas should be organised to give reasonable continuity of care.	Y	

Ref	Standard	Met?	Reviewer's comments
L1-206	**Competence Framework and Training Plan – Staff Providing Bedside Care** A competence framework and training plan should ensure that all staff providing bedside care have or are working towards, and maintain, competences appropriate for their role in the service including: a. Paediatric resuscitation: All staff should have basic paediatric resuscitation and life support competences and the service should have sufficient staff with advanced paediatric resuscitation and life support competences to achieve at least the minimum staffing levels (QS L1-208) and expected input to the paediatric resuscitation team (QS HW-204) b. Care and rehabilitation of children with trauma (if applicable) c. Care of children needing surgery (if applicable) d. Use of equipment as expected for their role e. Care of children with acute mental health problems f. Appropriate level paediatric critical care competences: 70% of nursing staff working on the PCC Units should have appropriate level competences in paediatric critical care.	N	The competence frame work would benefit from review to include more specific detail for achievement of HDU competences.
L1-207	**Staffing Levels: Bedside Care** Nursing and non-registered health care staffing levels should be appropriate for the number, dependency and case-mix of children normally cared for by the service and the lay-out of the unit. An escalation policy should show how staffing levels will respond to fluctuations in the number and dependency of patients. If staffing levels are achieved through flexible use of staff (rather than rostering), achievement of expected staffing levels should have been audited. Before starting work in the service, local induction and a review of competence for their expected role should be completed for all agency, bank and locum staff. The following minimum nurse staffing levels should be achieved: a. At least one nurse with up to date advanced paediatric resuscitation and life support competences on each shift b. At least two registered children's nurses on duty at all times in each area c. At least one nurse per shift with appropriate level competences in paediatric critical care d. One nurse with appropriate level competences in paediatric critical care for every two children needing Level 1 critical care	Y	

Ref	Standard	Met?	Reviewer's comments
L1-208	**New Starters** Nurses and non-registered health care staff without previous paediatric critical care experience should undertake: a. A structured, competency-based induction programme including a minimum of 75 hours of supervised practice in the PCC Unit (or in a higher level unit) b. A programme of theoretical and bedside education and training ensuring a defined level of competency is achieved within 12 months Nurses and non-registered health care staff with previous paediatric critical care experience should complete local induction and a review of competence for their expected role.	Y	
L1-209	**Other Staffing** 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 a liaison health worker for children with mental health needs (7/7) c. Access to staff with competences in psychological support (at least 5/7) d. Pharmacist with paediatric competences (with time allocated at least 5/7 for work on the unit) e. Physiotherapist with paediatric competences (with time allocated at least 5/7 for work on the unit) f. On-call access to pharmacy and physiotherapy services able to support the care of children (24/7) g. Access to dietetic service (at least 5/7) h. Access to an educator for the training, education and continuing professional development of staff	N	Access to a liaison health worker for children with mental health needs was only available Monday to Friday.
L1-301	**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.	Y	

Ref	Standard	Met?	Reviewer's comments
L1-401	**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.	Y	
L1-402	**'Grab Bag'** Appropriate drugs and equipment for in-hospital and time-critical transfers should be immediately available and checked in accordance with local policy.	Y	
L1-404	**Facilities** Paediatric critical care should be provided in a designated area, distinct from children needing general paediatric care.	Y	Four bed spaces were identified and equipped to care for children with level one high dependency needs.
L1-405	**Equipment** Equipment, including disposables, should be appropriate for the usual number and age of children and the critical care interventions provided. Equipment should be checked in accordance with local policy.	Y	
L1-406	**'Point of Care' Testing** 'Point of care' testing for blood gases, glucose, electrolytes and lactate should be easily available.	Y	
IP-501	**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.	Y	
L1-502	**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.	Y	
L1-503	**Resuscitation and Stabilisation** Hospital-wide protocols for resuscitation and stabilisation should be in use, including: 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	Y	As See QS HW 501

Ref	Standard	Met?	Reviewer's comments
L1-504	**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.	N/A	
L1-505	**Clinical Guidelines** The following clinical guidelines should be in use: **All:** **a.** Treatment of all major conditions, including: i. i. acute respiratory failure (including bronchiolitis and asthma) ii. ii. sepsis (including septic shock and meningococcal infection) iii. iii. management of diabetic ketoacidosis iv. iv. seizures and status epilepticus v. v. trauma, including traumatic brain injury, spinal injury and rehabilitation of children following trauma (if applicable) vi. vi. burns and scalds vii. vii. cardiac arrhythmia viii.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 h. Nasal high flow therapy (if used) i. Management of children undergoing surgery (if applicable) j. Rehabilitation after critical illness (if applicable)	Y	
L1-506	**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	Y	

Ref	Standard	Met?	Reviewer's comments
L1-507	**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.	Y	
L1-508	**Inter-hospital Transfer Guidelines** Guidelines on transfer of children between hospitals or between hospital sites should be in use covering at least: a. Types of patients transferred b. Composition and expected competences of the escort team c. Drugs and equipment required d. Restraint of children, equipment and staff during transfer e. Monitoring during transfer	Y	
L1-509	**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 (QS L1-506) 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 a) care of the critically ill child, b) emergency transfer and c) advanced airway management c. Indemnity for escort team d. Availability of drugs and equipment, checked in accordance with local policy (QS L1-402) 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	Y	Documentation of indemnity for escort team would benefit from being clearer in the policy. Arrangements for ensuring restraint of children, equipment and staff during transfer was included in the Transfer of Children Policy.

Ref	Standard	Met?	Reviewer's comments
L1-601	**Operational Policy** All: 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 f. Arrangements for admission within four hours of the decision to admit g. Types of patient admitted h. Review by a senior clinician within four hours of admission i. Discussion with a consultant within four hours of admission j. Review by a consultant within 14 hours of admission and at least two consultant-led clinical handovers every 24 hours k. Handover of patients at each change of responsible consultant, non-consultant medical staff, nursing staff and other staff l. Discussion with a senior clinician prior to discharge	N	The operational and HDU polices included 'b',c and 'h' but no other aspects as required by the QS. Review by a consultant within 14 hours of admission and at least two consultant-led clinical handovers every 24 hours ('j') was not compliant on Saturdays and Sundays.
L1-702	**Data Collection** The service should collect: a. Paediatric Intensive Care Audit Network (PICANet) data b. Paediatric Critical Care Minimum Data Set for submission to Secondary Uses Service (SUS) c. 'Quality Dashboard' data as recommended by the PCC Clinical Reference Group (CRG)	Y	Data were collected but not yet submitted.
L1-703	**Audit and Quality Improvement** The service should have a rolling programme of audit, including at least: a. Audit of implementation of evidence based guidelines (QS L1-500s) b. Participation in agreed national and network-wide audits c. Use of the 'Urgent and Emergency Care Clinical Audit Toolkit' to review individual clinical consultations	Y	'c' was not applicable

Ref	Standard	Met?	Reviewer's comments
L1-704	**Key Performance Indicators** Key performance indicators should be reviewed regularly with Hospital (or equivalent) management and with commissioners.	N	KPIs had been agreed but shown to be unrealistic so were in the process of being reviewed, however reviewers considered that many were appropriate performance indicators.
L1-798	**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'.	Y	

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