WM QRS West Midlands Quality Review Service

NHS

West Midlands Paediatric Critical Care Network

Care of Critically Ill & Critically Injured Children Quality Review Visit

Worcestershire Acute Hospitals NHS Trust

Visit Date: 19th September 2018 Report Date: November 2018

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UKAS INSPECTION 8831

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INTRODUCTION

This short report presents the findings of the review of the care of Critically Ill and Critically Injured Children that took place on 19th 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 outlined 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 to review the pathway for critically ill children attending the Emergency Department and children's assessment unit through to inpatient and high dependency inpatient areas where applicable. 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 a higher level of paediatric critical 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 response, and WMQRS's response to any actions taken to mitigate the risk. Appendix 1 lists the visiting team that reviewed the services at Worcestershire Acute Hospitals 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:

- Worcestershire Acute Hospitals NHS Trust
- NHS Redditch and Bromsgrove Clinical Commissioning Group
- NHS South Worcestershire Clinical Commissioning Group
- NHS Wyre Forest 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 commissioner in relation to this report is NHS South Worcestershire Clinical Commissioning Group.

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 Worcestershire Acute Hospitals 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

This review looked at the care of critically ill and critically injured children in the Emergency Department (ED) and inpatient and high dependency care at Worcestershire Royal Hospital. The paediatric services provided at the Alexandra Hospital were not included in this review.

Reviewers acknowledged the significant change that had taken place with the reconfiguration of children's services across the Trust. The Alexandra Hospital provided a paediatric minor injuries service. All children and young people who needed hospital admission were transferred to the emergency department or inpatient ward at Worcestershire Royal Hospital. A county-wide Head of Children and Young Peoples Nursing had been appointed.

Reviewers who met with staff during the visit saw good working relationships between the ED and the paediatric team. Staff were appreciative of the support available from other services.

Some comments in the Trust-wide section of this report apply to more than one service and so are not duplicated in other areas of the report.

Good Practice

1. Reviewers were impressed with the software programme for mobile devices (App) that had been implemented to monitor the checking of resuscitation trolleys. The programme was enabled to send a reminder to the device holder if a check had not been completed by 11am each day.
2. Information and guidance for staff caring for children and adolescents with mental health issues was very comprehensive.

Immediate Risks: None

Serious Concerns

1. **Care of ill children attending the Alexandra Hospital**[1]

   Reviewers did not visit the hospital site or have the opportunity to talk to staff and nor did they see evidence of staff competence in the emergency care of children> They could therefore not be assured that the pathway for children who arrived at the Alexandra Hospital was robust. From discussions with staff at the visit, reviewers were made aware that the ED was caring for ill children, and not just those with minor ailments and minor injuries. Reviewers were told that staff would seek advice from the paediatric team at Worcestershire Royal Hospital and initiate treatment prior to transfer. Reviewers were told that the only children who would remain in the Alexandra Hospital ED for longer than four hours were those who were waiting for a non-emergency transfer. It was not clear whether sufficient staff with appropriate and up to date advanced paediatric resuscitation and life support competences were always on duty, or whether protocols were in place and being followed for managing children that were being cared for in the department.

[1] **Trust Response**: Currently 40% of staff have trained in European Paediatric Life Support (EPLS). All Emergency Department (ED) Nurses at the Alexandra Hospital will have completed their Paediatric Immediate Life Support (PILS) training or will be booked onto a course. Due to high staff turnover all new starters have been booked onto a course. We offer 8 spaces each year.

2. **Anaesthetic Cover** [2]

The reviewers were seriously concerned about arrangements for anaesthetic on-call cover for both Worcestershire Royal Hospital and the Alexandra Hospitals. From the data available only 48% of general anaesthetists had up to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management and from the evidence seen it did not appear that there was always cover by an on-call anaesthetist with the relevant paediatric competence. Reviewers were particularly concerned about the cover at the Alexandra Hospital as reviewers were told that sick children, other than those with minor injuries, were being managed by ED staff with telephone support from the Worcester paediatric consultant team.

Concern

1. **Guidelines and polices**

The governance of guidelines and policies was of concern. Many of the guidelines seen by the reviewers, including the resuscitation policy, had exceed their review date, and reviewers were concerned that there was not a robust process for oversight of the effectiveness of the guidelines in use. A number of guidelines had also had their review dates extended. Reviewers also considered that the better indexing and collation of guidelines would ensure that staff were able to access appropriate information more easily.

Further Consideration

1. A robust time critical transfer policy was not yet in place. The time critical policy was part of the Trust paediatric transfer policy and only included contacting the KIDS intensive support team for advice. The policy did not include any details about situations, roles, equipment, responsibilities and indemnity arrangements for Trust staff in the emergency transfer.

CHILDREN'S EMERGENCY DEPARTMENT

General Comments and Achievements

See Trust-wide section of the report (under General Comments).

Good Practice

1. The ED handbook was very comprehensive and linked to a good Ed induction programme for medical staff.

Immediate Risks: None

Concerns

1. **Children's trained nurses**

The ED only had two children's trained nurses, and therefore the department was not able to meet the expected standards of one children's trained nurse in the department at all times. A third children's trained nurse had been appointed but had not yet commenced work within the department.

2. **Resuscitation training**

From the evidence seen, a nurse with competences in advanced paediatric resuscitation and life support was not on duty at all times, and some Band 6 and 7 nursing staff did not have up to date paediatric basic life training.

[2] **Trust Response:** The clinical lead for critical care is in the process of creating an in-house training session for all substantive anaesthetists to be delivered by EPLS/APLS trained instructors that will provide scenario based paediatric training in line with the recommendations of the Association of Paediatric Anaesthetists.

Further Consideration

1. See Trust-wide section of the report (under Further Consideration).

IN-PATIENT WARD AND PAEDIATRIC HIGH DEPENDENCY CARE

General Comments and Achievements

Inpatient services were provided on Riverbank Ward which consisted of 35 beds including three beds for HDU care. The environment on the ward was bright and welcoming. Staff clearly worked well together.

See Trust-wide section of the report (under General Comments).

Good Practice

1. The process for care planning was very good. Negotiated care plans had been introduced, which provided a written plan developed and agreed with the patient and/or their carer. There was also clear guidance for staff about when and how to use the plans.
2. The BRAG (black, red, amber, green) capacity assessment and monitoring tool, with the addition of a 'black' category rather than just red, amber and green, provided a more accurate measurement of acuity reporting of the intensity of nursing care required in the ward areas.
3. See Trust-wide section of the report (under Good Practice).

Immediate Risks: None

Concerns

1. See Trust-wide section of the report (under Concerns).

Further Consideration

1. The treatment room was small and was not designed as a resuscitation room, requiring all equipment to be taken to the bedside for an acutely ill child requiring resuscitation. This was not considered ideal for the child or staff. Reviewers considered that a review of the facilities should be considered as part of the project plan to redesign high dependency facilities
2. See Trust-wide section of the report (under Further Consideration).

EXISTING HDU CARE AND PLANS FOR THE FUTURE

At the time of the visit, HDU care could be provided for children who required continuous positive airway pressure (CPAP) ventilation and hi- flow nasal cannula oxygen. The team were keen to develop high dependency services further.

The Trust team and reviewers identified several areas for consideration by both the Trust and the WMPCCN in the future designation and provision of level 2 HDU care across the West Midlands.

1. Specific bed spaces for high dependency care are required and the reviewers were informed that these were planned.
2. The treatment room should be improved for resuscitation support, (see Further Consideration section above.
3. Standardising the paediatric early warning system (PEWS) in line with the Birmingham Women's and Children's NHS Foundation Trust Children's PEWS would be important when referring or receiving children to and from other areas.
4. The WMPCCN should work with all providers to develop medical and nursing competences for caring for patients on acute bilevel positive airway pressure (BiPAP) ventilation.

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APPENDIX 1 MEMBERSHIP OF VISITING TEAM

Visiting Team		
Juliet Brown	Network Coordinator	Birmingham Women's and Children's NHS Foundation Trust
Sue Ellis	Lead Nurse Paediatrics & Neonatology	University Hospitals Coventry & Warwickshire NHS Trust
Kara Marshall	Group Manager - Paediatrics and Neonatology	University Hospitals Coventry & Warwickshire NHS Trust
Dr Martyn Rees	Consultant Paediatrician	The Shrewsbury & Telford Hospital NHS Trust

Observer		
Dr Aparna Akula	Consultant Paediatrician	The Dudley Group 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	6	60
Emergency Department	20	15	75
Integrated IP & L1PCCU	30	28	93
Health Economy	**60**	**49**	**82**

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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	A Hospital-wide group was in the process of being established. Terms of reference for the group had been agreed but did not yet include a list of members or how the group would function.

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	Worcester Royal hospital had two anaesthetic rotas. From the anaesthetic rota available for both Worcester Royal and Redditch, only 48% of general anaesthetists had advanced paediatric resuscitation and life support training, for some days the rota was not clear if the on-call anaesthetist would have up-to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management.
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.	N	As HW-204
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	Reviewers were told that any critically ill child would be escorted to by a member of staff from the paediatric team.
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 of a child was included in a separate policy.

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	'c', the Trust used the WM Paediatric Palliative Care Toolkit the information had not yet been supplemented with information and guidance for use locally. Guidance covering staff acting outside their area of competence as required by the QS had not yet been agreed.
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	Y	
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.	Y	

Ref	Standard	Met?	Reviewer's comments
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	A nurse with advanced paediatric resuscitation and life support competences was not on duty at all times. From the evidence provided, not all band 6 and 7 nurses had up to date basic paediatric resuscitation and life support competences.
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	A registered children's nurse was not available at all times and there were plans to appoint a third nurse, but this would still not provide adequate cover.

Ref	Standard	Met?	Reviewer's comments
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	
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	However, two sub-speciality paediatric emergency medicine consultants were in post.
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	See report re plans for future development
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	

Ref	Standard	Met?	Reviewer's comments
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.	N	Data showed that only 85% of initial assessments were completed within 15 mins as defined in the policy.
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	
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	
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	N	All but guidance for 'g' were seen but many of the guidelines were had exceed their review date and some had the review dates extended.

Ref	Standard	Met?	Reviewer's comments
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	
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	

Ref	Standard	Met?	Reviewer's comments
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	N	Paediatric Resuscitation, Stabilisation Retrieval and Transfer policy would benefit from review to reflect roles and responsibilities for those involved in the emergency transfer if children were waiting for the SPTS to arrive may introduce unsafe delays. The policy only documented that the KIDS transport service would be contacted.
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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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	

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.	Y	
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	Care of the critically ill child competency framework based on 'Time to Move on' had been introduced and was being rolled out to new starters and existing trained staff. Good preceptorship pathways were also in place.
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	Y	
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	Depending on need the ward was able utilise the bay and side rooms for HDU care.
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	However, the policy was due for review in March 2018.

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.	Y	
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)	N	All but guidance for 'g' were seen but many of the guidelines were had exceed their review date and some had the review dates extended.
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	N	Paediatric Resuscitation, Stabilisation Retrieval and Transfer policy would benefit from review to reflect roles and responsibilities for those involved in the emergency transfer if children when waiting for the SPTS to arrive may introduce unsafe delays. The policy only documented that the KIDS transport service would be contacted.

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	Y	
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	
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.	Y	
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	Quality Improvement Meetings were held however the terms of refence for the group were a year out of date.

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