

# Care of Critically Ill & Critically Injured Children Quality Review Visit

The Royal Orthopaedic Hospital NHS Foundation Trust

Visit Date: 21<sup>st</sup> June 2017

Report Date: September 2017

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## INTRODUCTION

This report presents the findings of the review of the care of critically ill children at the Royal Orthopaedic Hospital NHS Foundation Trust that took place on 21<sup>st</sup> June 2017. The purpose of the visit was to review compliance with the following West Midlands Quality Review Service (WMQRS) Quality Standards:

- Care of Critically Ill and Critically Injured Children, Version 5.1 (2015)

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 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. Appendix 1 lists the visiting team that reviewed the services at the Royal Orthopaedic Hospital NHS Foundation 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 Royal Orthopaedic Hospital NHS Foundation Trust
- NHS England Specialised Commissioning Team (West Midlands)

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 England Specialised Commissioning Team (West Midlands).

## 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.wmqrns.nhs.uk](http://www.wmqrns.nhs.uk)

## ACKNOWLEDGMENTS

West Midlands Quality Review Service would like to thank the staff of the Royal Orthopaedic Hospital NHS Foundation 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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# THE ROYAL ORTHOPAEDIC HOSPITAL NHS FOUNDATION TRUST

## CARE OF CRITICALLY ILL CHILDREN

This review visit considered Trust-wide management of the care of children who were, or could become, critically ill, on the children's ward (Ward 11), and the two-bedded high dependency unit (HDU) which provided Level 2 paediatric critical care. The review also looked at paediatric anaesthesia and the contribution of the anaesthetic service to the care of critically ill children. At the Royal Orthopaedic Hospital (ROH) these services are closely interconnected and so the review team's findings are combined in this main report. Compliance with Quality Standards is reported separately for each aspect of the service (Appendix 2).

### General Comments and Achievements

Considerable progress had been made in the two years before this review visit, and staff at the Royal Orthopaedic Hospital had worked extremely hard to improve the quality and safety of care provided for children. Reviewers were very impressed by the personal commitment of all staff and the teamwork between different parts of the service. Much of the surgery undertaken was extremely complex and children travelled considerable distances for the highly specialised expertise provided by the Trust.

The Trust's achievements included the following:

- The governance of the care of children had been improved through the establishment of a Board-level Lead for children, a Children's Board (which brought together key staff involved in the care of children), and a Children's Forum.
- The two-bedded high dependency unit for children had been operational since February 2017.
- A Matron for the care of children and young people had been appointed.
- Additional nursing staff had been recruited so that, from November 2017, two children's trained nurses would be on duty at all times.
- A Service Level Agreement had been reached with Birmingham Women's and Children's NHS Foundation Trust for one consultant paediatrician session at the Royal Orthopaedic Hospital five days a week, 24/7 access to advice from a general paediatrician and access to additional training courses.
- A paediatric Associate Medical Director had been appointed.
- Consultant anaesthetists and some nurses had spent time at Birmingham Children's Hospital (BCH) in order to refresh their skills in caring for critically ill children.
- A Paediatric Early Warning System (PEWS) had been introduced and links with the KIDS (Kids Intensive Care and Decision Support) paediatric retrieval service had improved.
- Partners in Paediatrics clinical guidelines had been adopted and the Trust was actively participating in the paediatric critical care network.
- The requirements for resuscitation training had been reviewed to ensure all staff in contact with children and young people had the appropriate level of training.
- Resuscitation equipment had been reviewed and new equipment, including 'grab bags' introduced.
- A multi-disciplinary team meeting on the HDU had been introduced and included input from pharmacy and physiotherapy staff.

### Good Practice

1. The HDU had been developed in partnership with the Teenage Cancer Trust and provided a comfortable and supportive environment, tailored to the needs of children and young people. Young people and families had been involved in the design of the unit which also had excellent facilities for parents.

## Immediate Risks

### 1. Paediatric medical cover

Consultant paediatrician cover was available for a maximum of 20 hours per week. Some children, such as those with cancer, had a high risk of deterioration for non-surgical reasons. This issue was of particular concern in relation to the children on the HDU. The unit did not meet the expected standard for consultant cover for a Level 2 paediatric critical care unit and reviewers considered that it was not feasible for this standard to be achieved at the Royal Orthopaedic Hospital.<sup>1</sup> Some children were admitted following major surgery and needed central venous line monitoring, arterial blood pressure monitoring and non-invasive ventilation. Although triaged as not needing Level 3 critical care, the care required was more complex than would be provided in many Level 2 units, and in some parts of the country these children would be admitted to Level 3 units. These children were managed by middle grade anaesthetic staff, with the on-call consultant anaesthetist involved if required, but were not seen by a consultant paediatrician until the next working day.

See also the 'concerns' section of this report for further related issues in relation to medical staffing.

### 2. Guidelines and protocols

Guidelines and protocols, including Standard Operating Procedures, did not provide robust documentation of the systems and processes for the care of children. This is particularly important because of the need to access off site support and because of the small number of on-site staff involved in caring for children (and therefore potential reliance on locums or temporary staff). Reviewers were particularly concerned about:

- a. The criteria for admission of children to the ROH for surgery were not clearly defined, in particular in relation to children aged between three and five years or children for whom it was "impractical to be operated on elsewhere". Also, consultant anaesthetists who met the visiting team described the criteria in terms of weight although weight, was not mentioned in the written policy. The looseness of the criteria could result in pressure on Trust staff, especially if a Paediatric Intensive Care Unit (PICU) bed was not available at BCH and a child had been waiting for surgery for a long time. Paediatricians were not involved in the multi-disciplinary discussion about admission of these children, and staff at the ROH may not be fully aware of the risks involved. Reviewers were given examples of recent cases where problems had occurred.
- b. Criteria for admission to the HDU were not clearly defined.
- c. Guidelines on accessing paediatric advice were not clear. The PEWS chart indicated when a child's condition should be escalated and the KIDS retrieval service was then contacted. Nursing staff did not mention the option of contacting the on-call general paediatrician from BCH as defined in the service level agreement. Opportunities for preventing problems or intervening at an early stage may therefore be being missed. Also, the arrangements used the regional (rather than local) service to assess if a child was critically ill. Reviewers considered that this placed inappropriate risk on both local and KIDS staff.

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#### <sup>1</sup> Level 2 Paediatric Critical Care Consultant Staffing (QS PM-202)

- a. A consultant who has undertaken relevant training in paediatric critical care, 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. If the consultant providing cover for the L2 PCC Unit is not a paediatrician, 24 hour cover by a consultant paediatrician who is able to attend the hospital within 30 minutes and who does not have responsibilities to other hospital sites is also required.
- b. New appointments to consultant posts in L2 PCCUs should have completed the RCPCH 'Framework of Competences for a Special Study Model in Paediatric Critical Care' (or equivalent) and should have worked for at least six months in a Level 2 and for at least six months in a Level 3 PCCU (or equivalent).
- c. 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.

- d. Multiple clinical guidelines of relevance to the care of critically ill children were available including *Partners in Paediatrics* guidelines, BCH guidelines and ROH guidelines. Some of the ROH guidelines were out of date (for example, 2011). Guidelines on fluid management and who to start on non-invasive ventilation were not yet in place. Some other guidelines were duplicated and inconsistent. Reviewers were told that staff usually accessed the guidelines with which they were most familiar.
- e. The in-hospital and inter-hospital transfer policies were not clear about the competences expected of the escort.
- f. The policy on admission of children under 16 to the adult high dependency unit was not clear. Some staff said that children aged 15 could be admitted to this unit.

## Concerns

### 1. Medical Staffing

- a. Ward 11 did not have an identified lead consultant. Individual orthopaedic consultants took responsibility for their own patients with paediatric advice provided by the visiting consultant paediatrician who should be on site from 9am to 12 noon, Mondays to Fridays. Consultant paediatrician cover had increased from three to five days a week in the week of the review visit with robust arrangements reliant on additional consultant appointments at BCH. Children undergoing operations on Fridays were not seen by a consultant paediatrician until the following Monday. The lead paediatric anaesthetist was identified as the lead consultant for the HDU.
- b. There was a lack of continuity of medical care. Three different BCH consultants attended on Tuesdays, Wednesdays and Thursdays and one of the three attended on Mondays and Fridays, if possible. The BCH consultant paediatrician's ward rounds on the HDU did not involve the middle grade or consultant anaesthetist with responsibility for the HDU that day.
- c. The on-call anaesthetists had undertaken advanced paediatric life support training and those who regularly anaesthetised children had spent some time in the BCH PICU in order to refresh their skills in the care of critically ill children. Some anaesthetists on the on-call rota did not regularly anaesthetise children and so may not be confident in managing unexpected airway problems. The Trust was planning to undertake difficult airway simulation sessions for these consultants.

### 2. Nurse Staffing

The Trust had been successful in appointing to vacancies on Ward 11 and the HDU and was planning to meet the standard of two children's nurses on duty at all times from November 2017. In the short-term, shifts were covered by existing staff plus agency nurses with experience of working at BCH, with at least one children's trained nurse on duty at all times. Reviewers were impressed by the progress which had been achieved, especially given the national shortage of children's trained nurses, but were concerned that nurse staffing levels remained vulnerable to unexpected absences.

### 3. Governance

Two governance issues were of concern to reviewers:

- a. Data collection and audit of the care of children were not yet embedded. Anaesthetic audits and Trust-wide nursing audits were in place but reviewers saw no evidence of audits specific to the care of children.
- b. The Assistant Medical Director with responsibility for children was not usually able to attend Children's Board meetings as these were scheduled at a time that clashed with other commitments. This limited the extent to which the responsibilities of this post could be fulfilled.

## Further Consideration

1. The Trust was working to improve the information available for children and young people. The language in some of the examples seen by reviewers was quite difficult to understand and further work on making information child-friendly may be helpful.
2. The Trust had good mechanisms for getting feedback from patients and carers including through the Trust website, although there did not appear to be any mechanisms specific to theatres and anaesthetics. From the evidence provided it was more difficult for reviewers to understand the results and see the actions that had been taken as a result of feedback. It was also not clear whether children (rather than parents) were providing feedback. The Trust Children's Board may wish to consider whether the mechanisms for getting feedback from children and families, and ensuring action is taken as a result, could be developed further.
3. Reviewers were assured that all consultants had safeguarding of children training to Level 3, but they did not see evidence of this. Reviewers recommended that the Trust check this and, if required, ensure training is undertaken as soon as possible.
4. It was not clear to reviewers that all relevant incidents and near misses were being reported, as scenarios discussed with a range of staff who met with the visiting team identified an inconsistent and variation in the threshold for reporting. Further work in this area should consider whether there is a problem and, if so, whether this arises from a lack of awareness about the care of children or from a need for greater openness and reporting.

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## APPENDIX 1 MEMBERSHIP OF VISITING TEAM

Visiting Team		
Dr John Alexander	Clinical Director, Paediatric Intensive Care Unit	University Hospitals of North Midlands NHS Trust
Emma Boyle	Senior Nurse, High Dependency Unit	University Hospitals Coventry & Warwickshire NHS Trust
Sue Ellis	Lead Nurse Paediatrics & Neonatology	University Hospitals Coventry & Warwickshire NHS Trust
Emily Godfrey	Head of Strategy, Planning and QIPP PMO	NHS South Worcestershire Clinical Commissioning Group
Surinder Judge	Senior Nurse	The Royal Wolverhampton NHS Trust
Dr Titus Ninan	Consultant Paediatrician	Heart of England NHS Foundation Trust
Dr Sue Smith	Consultant Anaesthetist (retired)	

WMQRS Team		
Jane Eminson	Director	West Midlands Quality Review Service

## 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
Trust-wide	11	8	<b>73</b>
In-patients & HDU	72	36	<b>50</b>
<ul style="list-style-type: none"> <li>In Patient Paediatric Services - Ward 11</li> </ul>	(34)	(17)	<b>50</b>
<ul style="list-style-type: none"> <li>Level 2 Paediatric Critical Care Units -HDU</li> </ul>	(38)	(19)	<b>50</b>
Paediatric Anaesthesia & General Intensive Care Unit	24	14	<b>58</b>
Commissioning	4	3	<b>75</b>
<b>Health Economy</b>	<b>183</b>	<b>97</b>	<b>53</b>

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## TRUST-WIDE

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PC-201	<p><b>Board-Level Lead for Children</b></p> <p>A Board-level lead for children's services should be identified.</p>	Y	
PC-202	<p><b>Clinical Leads</b></p> <p>The Board-level lead for children's services should ensure that the following leads for the care of children have been identified:</p> <ol style="list-style-type: none"> <li>Lead consultants and nurses for each of the areas where children may be critically ill (QS PM-201)</li> <li>Lead consultant for paediatric critical care</li> <li>Lead consultant for surgery in children (if applicable)</li> <li>Lead consultant for trauma in children (if applicable)</li> <li>Lead anaesthetist for children (QS PG-201)</li> <li>Lead anaesthetist for paediatric critical care (QS PG-202)</li> <li>Lead GICU consultant for children (QS PG-203) (if applicable)</li> <li>Lead consultant/s and lead nurse/s for the Specialist Paediatric Transport Service (QS PT-201) (if applicable)</li> <li>Lead consultant and lead nurse and for safeguarding children</li> <li>Lead allied health professional for the care of critically ill children</li> </ol>	N	Ward 11 did not have an identified lead consultant. A lead consultant anaesthetist for paediatric critical care and the high dependency unit was identified in the self-assessment. See also comments to QS PM-201.
PC-203	<p><b>Trust-Wide Group</b></p> <p>Trusts 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 PC-202) and the Resuscitation Officer with lead responsibility for children.</p> <p>The accountability of the group should include the Trust Lead for children's services (QS PC-201). The relationship of the group to the Trust's mechanisms for safeguarding children and clinical governance issues relating to children should be clear.</p>	Y	

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PC-204	<p><b>Paediatric Resuscitation Team</b></p> <p>A paediatric resuscitation team should be immediately available at all times, comprising at least three people:</p> <ol style="list-style-type: none"> <li>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)</li> <li>A second registered healthcare professional with up to date advanced paediatric resuscitation and life support competences</li> <li>An anaesthetist or other doctor with up to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management</li> </ol>	Y	
PC-205	<p><b>Consultant Anaesthetist 24 Hour Cover</b></p> <p>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.</p>	Y	
PC-206	<p><b>Other Clinical Areas</b></p> <p>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.</p>	N	Therapy staff who had contact with children and young people had paediatric basic life support training but imaging staff did not. The Trust considered that imaging staff did not require this training as their work was mostly with out-patients. In-patients were accompanied by a nurse with resuscitation and life support training.
PC-401	<p><b>Paediatric Resuscitation Team – Equipment</b></p> <p>The paediatric resuscitation team should have immediate access to appropriate drugs and equipment which are checked in accordance with local policy.</p>	Y	Arrangements for checking resuscitation equipment were robust.
PC-501	<p><b>Resuscitation and Stabilisation</b></p> <p>Protocols should be in use covering resuscitation and stabilisation, including:</p> <ol style="list-style-type: none"> <li>Alerting the paediatric resuscitation team</li> <li>Arrangements for accessing support for difficult airway management</li> <li>Stabilisation and ongoing care</li> <li>Care of parents during the resuscitation of a child</li> </ol>	Y	

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PC-502	<p><b>Surgery and Anaesthesia Criteria</b></p> <p>Trust-Wide guidelines on criteria for surgery and anaesthesia for children should be in use covering:</p> <ul style="list-style-type: none"> <li>a. Elective and emergency surgical procedures undertaken on children of different ages</li> <li>b. Day case criteria</li> <li>c. Non-surgical procedures requiring anaesthesia or conscious sedation</li> </ul>	Y	See main report (immediate risks section).
PC-598	<p><b>Trust-Wide Guidelines</b></p> <p>The following Trust-Wide guidelines should be in use:</p> <ul style="list-style-type: none"> <li>a. Consent</li> <li>b. Organ and tissue donation</li> <li>c. Palliative care</li> <li>d. Bereavement</li> <li>e. Staff acting outside their area of competence covering: <ul style="list-style-type: none"> <li>i. Exceptional circumstances when this may occur</li> <li>ii. Staff responsibilities</li> <li>iii. Reporting of event as an untoward clinical incident</li> <li>iv. Support for staff</li> </ul> </li> </ul>	N	Guidelines were not yet in place for 'd' or 'e'. The guidelines for 'b' covered research but not donation.
PC-602	<p><b>Paediatric Critical Care Operational Delivery Network Involvement</b></p> <p>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.</p>	Y	The lead anaesthetist regularly attended meetings of the paediatric critical care operational delivery network.

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## IN-PATIENTS & HDU

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-101	<p><b>Child-friendly Environment</b></p> <p>Children should be cared for in a defined safe and secure child-friendly environment, with age-appropriate stimulation and distraction activities.</p>	Y		Y	
PM-102	<p><b>Parental Access and Involvement</b></p> <p>Parents should:</p> <ol style="list-style-type: none"> <li>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</li> <li>Be informed of the child's condition, care plan and emergency transfer (if necessary) and this information should be updated regularly</li> <li>Have information, encouragement and support to enable them fully to participate in decisions about, and in the care of, their child</li> </ol>	Y		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-103	<p><b>Information for Children</b></p> <p>Children should be offered age-appropriate information, encouragement and support to enable them to share in decisions about their care. Written information about common conditions should be available.</p>	Y	A lot of information was available about different conditions. Some appeared to have been adapted from information for adults, and the language could be more child-friendly. Trust staff were aware of this and were working through the available information in order to improve it.	Y	As Ward 11.
PM-104	<p><b>Information for Families</b></p> <p>Information for families should be available covering, at least:</p> <ol style="list-style-type: none"> <li>The child's condition</li> <li>How parents can take part in decisions about their child's care</li> <li>Participation in the delivery of care and presence during interventions</li> <li>Support available including access to psychological and financial support</li> <li>How to get a drink and food</li> <li>Layout of the unit or ward, visiting arrangements including arrangements for children to visit, car parking advice, ward routines and location of facilities within the hospital that families may wish to use</li> <li>Relevant support groups and voluntary organisations</li> </ol>	Y		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-105	<p><b>Facilities and Support for Families</b></p> <p>Facilities should be available for families, including:</p> <ul style="list-style-type: none"> <li>a. Somewhere to sit away from the ward</li> <li>b. Quiet room for relatives</li> <li>c. Kitchen, toilet and washing area</li> <li>d. Changing area for other young children</li> <li>e. Midwifery and breast feeding support</li> <li>f. Breast feeding facilities</li> <li>g. Chair for parents to sit next to the child</li> <li>h. Access to psychological support</li> </ul>	Y		Y	
PM-196	<p><b>Discharge Information</b></p> <p>On discharge home, children and families should be offered written information about:</p> <ul style="list-style-type: none"> <li>a. Care after discharge</li> <li>b. Early warning signs of problems and what to do if these occur</li> <li>c. Who to contact for advice and their contact details</li> </ul>	Y		N/A	Children were not discharged home from the HDU.
PM-197	<p><b>Additional Support for Families</b></p> <p>Families should have access to the following support and information about these services should be available:</p> <ul style="list-style-type: none"> <li>a. Interfaith and spiritual support</li> <li>b. Social workers</li> <li>c. Interpreters</li> <li>d. Bereavement support</li> <li>e. Patient Advice and Advocacy Services</li> </ul>	Y		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-199	<p><b>Involving Children and Families</b></p> <p>The service should have:</p> <ul style="list-style-type: none"> <li>a. Mechanisms for receiving feedback from children and families about the treatment and care they receive</li> <li>b. Mechanisms for involving children and families in decisions about the organisation of the service</li> <li>c. Examples of changes made as a result of feedback and involvement of children and families</li> </ul>	Y	See main report (further consideration section).	Y	
PM-201	<p><b>Lead Consultant and Lead Nurse</b></p> <p>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.</p>	N	A lead nurse was identified but not a lead consultant.	N	The lead nurse for the HDU was not a children's trained nurse. A lead consultant was identified in the Trust-wide self-assessment.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-202	<p><b>Consultant Staffing</b></p> <p>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</p> <p>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</p>	N	Children on Ward 11 were under the care of individual orthopaedic consultants who did not have CPD of relevance to the care of critically ill children. Consultant paediatricians were only on site from 9am to 12 noon Mondays to Fridays.	N	There was not 24 hour cover by a consultant paediatrician who was able to attend the hospital within 30 minutes and did not have responsibilities to other hospital sites.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-203	<p><b>'Middle Grade' Clinician</b></p> <p>A 'middle grade' clinician with the following competences should be immediately available at all times:</p> <ol style="list-style-type: none"> <li>Advanced paediatric resuscitation and life support</li> <li>Assessment of the ill child and recognition of serious illness and injury</li> <li>Initiation of appropriate immediate treatment</li> <li>Prescribing and administering resuscitation and other appropriate drugs</li> <li>Provision of appropriate pain management</li> <li>Effective communication with children and their families</li> <li>Effective communication with other members of the multi-disciplinary team, including the on-duty consultant</li> </ol> <p>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.</p>	N	A surgical Senior House Officer covered Ward 11 but did not have the required competences in the care of children. The middle grade doctor from the HDU would go to Ward 11 if called, but did not have Level 1 RCPCH competences (or equivalent).	Y	A middle grade anaesthetic doctor had responsibility for the HDU.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-205	<p><b>Medical Staff: Continuity of Care</b></p> <p>Consultant rotas should be organised to give reasonable continuity of care.</p>	N	See main report (concerns section)	N	See main report (concerns section)
PM-206	<p><b>Competence Framework and Training Plan – Staff Providing Bedside Care</b></p> <p>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:</p> <ol style="list-style-type: none"> <li>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 PM-208) and expected input to the paediatric resuscitation team (QS HW-204)</li> <li>Care and rehabilitation of children with trauma (if applicable)</li> <li>Care of children needing surgery (if applicable)</li> <li>Use of equipment as expected for their role</li> <li>Care of children with acute mental health problems</li> <li>Appropriate level paediatric critical care competences: 70% of nursing staff working on the PCC Units should have appropriate level competences in paediatric critical care.</li> </ol>	Y		N	Nurses on the HDU had Paediatric Immediate Life Support (PILS) training but not Advanced paediatric life support (APLS) training. The service had a plan to recruit and train sufficient nurses. Nursing staff had spent time at BCH in order to improve their critical care skills.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-207	<p><b>Staffing Levels: Bedside Care</b></p> <p>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.</p> <p>The following minimum nurse staffing levels should be achieved:</p> <ol style="list-style-type: none"> <li>At least one nurse with up to date advanced paediatric resuscitation and life support competences on each shift</li> <li>At least two registered children's nurses on duty at all times in each area</li> <li>At least one nurse per shift with appropriate level competences in paediatric critical care</li> <li>One nurse with appropriate level competences in paediatric critical care for every two children needing Level 1 critical care</li> </ol>	Y		N	At the time of the review the HDU met 'a', 'c' and 'd' but did not always have two registered children's nurses ('b'). 'e' was not applicable. Newly qualified nurses were being recruited to the unit's establishment, although it would take some time for these to achieve the necessary competences.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-208	<p><b>New Starters</b></p> <p>Nurses and non-registered health care staff without previous paediatric critical care experience should undertake:</p> <ol style="list-style-type: none"> <li>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)</li> <li>A programme of theoretical and bedside education and training ensuring a defined level of competency is achieved within 12 months</li> </ol> <p>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.</p>	N/A		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-209	<p><b>Other Staffing</b></p> <p>The following staff should be available:</p> <ul style="list-style-type: none"> <li>a. Appropriately qualified staff to provide support for play, mental stimulation and distraction during procedures (7/7)</li> <li>b. Access to a liaison health worker for children with mental health needs (7/7)</li> <li>c. Access to staff with competences in psychological support (at least 5/7)</li> <li>d. Pharmacist with paediatric competences (with time allocated at least 5/7 for work on the unit)</li> <li>e. Physiotherapist with paediatric competences (with time allocated at least 5/7 for work on the unit)</li> <li>f. On-call access to pharmacy and physiotherapy services able to support the care of children (24/7)</li> <li>g. Access to dietetic service (at least 5/7)</li> <li>h. Access to an educator for the training, education and continuing professional development of staff</li> </ul>	N	No play specialists were in post at the time of the review. Reviewers also saw no evidence of pharmacy support with paediatric competences. The ward had good physiotherapy and youth worker support.	N	No play specialists were in post at the time of the review. The unit had pharmacy, physiotherapy and dietetic support.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-298	<p><b>Safeguarding Training</b></p> <p>All staff involved with the care of children should:</p> <ul style="list-style-type: none"> <li>a. Have training in safeguarding children appropriate to their role, as agreed by the Trust and local Safeguarding Board</li> <li>b. Be aware of who to contact if they have concerns about safeguarding issues</li> <li>c. Work in accordance with latest national guidance on safeguarding children and the safeguarding policy of the Trust and local Safeguarding Board</li> </ul>	Y	See 'further consideration' section of main report.	Y	See 'further consideration' section of main report.
PM-299	<p><b>Administrative, Clerical and Data Collection Support</b></p> <p>Administrative, clerical and data collection support should be available.</p>	N	It was not clear whether administrative, clerical and data collection support was available. Reviewers saw little evidence of data collection.	N	It was not clear whether administrative, clerical and data collection support was available. Reviewers saw little evidence of data collection.
PM-301	<p><b>Imaging Services</b></p> <p>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 Trust should have arrangements for review of imaging by a paediatric radiologist.</p>	N	Children and young people requiring imaging outside normal working hours were transferred to BCH.	N	Children and young people requiring imaging outside normal working hours were transferred to BCH.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-302	<p><b>Co-located Services (L2 &amp; L3 PCC Units only)</b></p> <p>L2 PCC Units should be co-located with ENT services for the support of children with tracheostomies.</p> <p>L3 PCC Units should be co-located with the following services:</p> <ol style="list-style-type: none"> <li>ENT (Airway)</li> <li>Specialised paediatric surgery</li> <li>Specialised paediatric anaesthesia</li> </ol> <p>L3 PCC Units should be co-located or work as an 'integrated clinical service' with the following paediatric services:</p> <ol style="list-style-type: none"> <li>Clinical haematology</li> <li>Respiratory medicine</li> <li>Cardiology</li> <li>Congenital cardiac surgery</li> <li>Neuro-surgery</li> </ol>	N/A		N/A	Children with tracheostomies were not admitted to the unit.
PM-401	<p><b>Resuscitation Equipment</b></p> <p>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.</p>	Y		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-402	<p><b>'Grab Bag'</b></p> <p>Appropriate drugs and equipment for in-hospital and time-critical transfers should be immediately available and checked in accordance with local policy.</p>	N	A 'grab bag' had been ordered.	Y	
PM-404	<p><b>Facilities</b></p> <p>Paediatric critical care should be provided in a designated area, distinct from children needing general paediatric care.</p>	N/A		Y	The HDU provided a comfortable and supportive environment for the care of children and young people and was compliant with the latest Department of Health guidance.
PM-405	<p><b>Equipment</b></p> <p>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.</p>	N/A		Y	
PM-406	<p><b>'Point of Care' Testing</b></p> <p>'Point of care' testing for blood gases, glucose, electrolytes and lactate should be easily available.</p>	Y		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-501	<p><b>Initial Assessment</b></p> <p>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.</p>	N/A	Only elective patients were admitted to the ward.	N	The policy stated that admissions would be reviewed within 60 minutes although, in practice, patients were reviewed within 15 minutes of arrival by the anaesthetic specialist registrar and the HDU nurse.
PM-502	<p><b>Paediatric Early Warning System</b></p> <p>A system to provide early warning of deterioration of children should be in use. The system should cover observation, monitoring and escalation of care.</p>	Y	PEWS had been in use for six weeks prior to the review visit.	Y	PEWS had been in use for six weeks prior to the review visit.
PM-503	<p><b>Resuscitation and Stabilisation</b></p> <p>Trust-wide protocols for resuscitation and stabilisation should be in use, including:</p> <ol style="list-style-type: none"> <li>Alerting the paediatric resuscitation team</li> <li>Arrangements for accessing support for difficult airway management</li> <li>Stabilisation and ongoing care</li> <li>Care of parents during the resuscitation of a child</li> </ol>	N	The resuscitation policy for children and young people was in draft form and awaiting ratification.	N	The resuscitation policy for children and young people was in draft form and awaiting ratification.
PM-504	<p><b>Paediatric Advice (N/A to L3 PCC Units)</b></p> <p>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.</p>	N	See main report (immediate risks section).	N	See main report (immediate risks section).

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-505	<p><b>Clinical Guidelines</b></p> <p>The following clinical guidelines should be in use:</p> <p><b>All:</b></p> <ul style="list-style-type: none"> <li>a. . Treatment of all major conditions, including: <ul style="list-style-type: none"> <li>i. acute respiratory failure (including bronchiolitis and asthma)</li> <li>ii. sepsis (including septic shock and meningococcal infection)</li> <li>iii. management of diabetic ketoacidosis</li> <li>iv. seizures and status epilepticus</li> <li>v. trauma, including traumatic brain injury, spinal injury and rehabilitation of children following trauma (if applicable)</li> <li>vi. burns and scalds</li> <li>vii. cardiac arrhythmia</li> <li>viii. upper airway obstruction</li> </ul> </li> <li>b. Management of acutely distressed children, including use of restraint</li> <li>c. Drug administration and medicines management</li> <li>d. Pain management</li> <li>e. Procedural sedation and analgesia</li> <li>f. Infection control and antibiotic prescribing</li> <li>g. Tissue viability, including extravasation</li> <li>h. Nasal high flow therapy (if used)</li> <li>i. Management of children undergoing surgery (if applicable)</li> <li>j. Rehabilitation after critical illness (if applicable)</li> </ul>	N	See main report (immediate risks section).	N	See main report (immediate risks section).

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-506	<p><b>PCC Transfer Guidelines</b></p> <p>Guidelines on referral to a Specialist Paediatric Transport Service should be in use, covering at least:</p> <ul style="list-style-type: none"> <li>a. Accessing advice from a Specialist Paediatric Transport Service and providing full clinical information</li> <li>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</li> <li>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</li> </ul>	N	c' was not covered in the Trust guidelines. In practice, children would be taken to the HDU or, if no bed was available, to theatres or recovery.	N	c' was not covered in the Trust guidelines. In practice, children would be taken to the HDU or, if no bed was available, to theatres or recovery.
PM-507	<p><b>In-hospital Transfer Guidelines</b></p> <p>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.</p>	N	The in-hospital transfer policy was not specific about the competences of the escort. This was particularly relevant because of the long distance between the ward and HDU. .	N	The in-hospital transfer policy was not specific about the competences of the escort team. This was particularly relevant because of the long distance between the ward and the HDU. .

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-508	<p><b>Inter-hospital Transfer Guidelines</b></p> <p>Guidelines on transfer of children between hospitals or between hospital sites should be in use covering at least:</p> <ul style="list-style-type: none"> <li>a. Types of patients transferred</li> <li>b. Composition and expected competences of the escort team</li> <li>c. Drugs and equipment required</li> <li>d. Restraint of children, equipment and staff during transfer</li> <li>e. Monitoring during transfer</li> </ul>	N	The inter-hospital transfer guidelines were not clear about equipment, drugs, restraint or the competences of the escort team. .	N	The inter-hospital transfer guidelines were not clear about equipment, drugs, restraint or the competences of the escort team.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-509	<p><b>Time-Critical Transfer Guidelines</b></p> <p>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:</p> <ol style="list-style-type: none"> <li>Securing advice from the Specialist Paediatric Transport Service (QS PM-506)</li> <li>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</li> <li>Indemnity for escort team</li> <li>Availability of drugs and equipment, checked in accordance with local policy (QS PM-402)</li> <li>Arrangements for emergency transport with a local ambulance service and the air ambulance</li> <li>Arrangements for ensuring restraint of children, equipment and staff during transfer</li> </ol>	N/A	The ROH case-mix of patients meant that time critical transfers would not be required.	N/A	The ROH case-mix of patients meant that time-critical transfers would not be required.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-598	<p><b>Implementation of Trust Guidelines</b></p> <p>Staff should be aware of and following Trust guidelines (QS HW-598) for:</p> <ul style="list-style-type: none"> <li>a. Surgery and anaesthesia for children</li> <li>b. Consent</li> <li>c. Organ and tissue donation</li> <li>d. Palliative care</li> <li>e. Bereavement</li> <li>f. Staff acting outside their area of competence</li> </ul>	N	As QS PC-598.	N	As QS PC-598.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-601	<p><b>Operational Policy</b></p> <p><b>All:</b> The service should have an operational policy covering at least:</p> <ol style="list-style-type: none"> <li>Individualised management plans are accessible for children who have priority access to the service (where applicable)</li> <li>Informing the child's GP of their attendance / admission</li> <li>Level of staff authorised to discharge children</li> <li>Arrangements for consultant presence during 'times of peak activity' (7/7)</li> <li>Servicing and maintaining equipment, including 24 hour call out where appropriate</li> <li>Arrangements for a consultant-led rapid access service which can see children within 24 hours of referral</li> <li>Arrangements for admission within four hours of the decision to admit</li> <li>Types of patient admitted</li> <li>Review by a senior clinician within four hours of admission</li> <li>Discussion with a consultant within four hours of admission</li> <li>Review by a consultant within 14 hours of admission and at least two consultant-led clinical handovers every 24 hours</li> <li>Handover of patients at each change of responsible consultant, non-consultant medical staff, nursing staff and other staff</li> <li>Discussion with a senior clinician prior to discharge</li> </ol>	N	An operational policy was in draft form.	N	An operational policy was in draft form.

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-702	<p><b>Data Collection</b></p> <p>The service should collect:</p> <ul style="list-style-type: none"> <li>a. Paediatric Intensive Care Audit Network (PICANet) data</li> <li>b. Paediatric Critical Care Minimum Data Set for submission to Secondary Uses Service (SUS)</li> <li>c. 'Quality Dashboard' data as recommended by the PCC Clinical Reference Group (CRG)</li> </ul>	N/A		N	Paediatric critical care data were not yet collected.
PM-703	<p><b>Audit and Quality Improvement</b></p> <p>The service should have a rolling programme of audit, including at least:</p> <ul style="list-style-type: none"> <li>a. Audit of implementation of evidence based guidelines (QS PM-500s)</li> <li>b. Participation in agreed national and network-wide audits</li> <li>c. Use of the 'Urgent and Emergency Care Clinical Audit Toolkit' to review individual clinical consultations</li> </ul>	N	Trust-wide nursing audits were in place, for infection control, for example, but there were no specific audits about the care of children or audits of the implementation of guidelines relating to children.	N	Anaesthetic audits took place, as did Trust-wide nursing audits of, for example, infection control. There were no specific audits about the care of children on the HDU or audits of the implementation of guidelines relating to children.
PM-704	<p><b>Key Performance Indicators</b></p> <p>Key performance indicators should be reviewed regularly with Trust (or equivalent) management and with commissioners.</p>	Y		Y	

		In Patient Paediatric Services - Ward 11		Level 2 Paediatric Critical Care Units - HDU	
Ref	Quality Standards	Met? Y/N	Reviewer Comments	Met? Y/N	Reviewer Comments
PM-798	<p><b>Review and Learning</b></p> <p>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'.</p>	Y	These issues were discussed at weekly governance meetings, the Children's Board and the Trust's Quality Group.	Y	These issues were discussed at weekly governance meetings, the Children's Board and the Trust's Quality Group.
PM-799	<p><b>Document Control</b></p> <p>All policies, procedures and guidelines and should comply with Trust document control procedures.</p>	Y		Y	

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## PAEDIATRIC ANAESTHESIA & GENERAL INTENSIVE CARE UNIT

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PG-101	<p><b>Information on Anaesthesia</b></p> <p>Age-appropriate information about anaesthesia should be available for children and families.</p>	Y	
PG-199	<p><b>Involving Children and Families</b></p> <p>The service should have mechanisms for:</p> <ol style="list-style-type: none"> <li>Receiving feedback from children and families about the treatment and care they receive</li> <li>Involving children and families in decisions about the organisation of the service</li> </ol>	N	General feedback mechanisms were in place but none specifically relating to theatres and anaesthetics. See main report (further consideration section).
PG-201	<p><b>Lead Anaesthetist</b></p> <p>A nominated consultant anaesthetist should be responsible for policies and procedures relating to emergency and elective anaesthesia of children. This consultant should be involved in the delivery of anaesthetic services to children.</p>	Y	
PG-202	<p><b>Lead Anaesthetist for Paediatric Critical Care (PCC units only)</b></p> <p>A nominated consultant anaesthetist should have lead responsibility for support to paediatric critical care.</p>	Y	The Trust-wide self-assessment identified a lead consultant anaesthetist for paediatric critical care.
PG-203	<p><b>GICU Lead Consultant and Lead Nurse for Children</b></p> <p>A nominated lead intensive care consultant and lead nurse should be responsible for Intensive Care Unit policies, procedures and training relating to the care of children.</p>	N	Policies were not clear about the admission of children aged 15 to the adult high dependency unit. Reviewers were told that this happened occasionally.
PG-204	<p><b>On Site Anaesthetist</b></p> <p>An anaesthetist with up to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management should be immediately available at all times.</p>	Y	
PG-205	<p><b>Consultant Anaesthetist 24 Hour Cover</b></p> <p>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.</p>	Y	

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PG-206	<p><b>Medical Staff Caring for Children</b></p> <p>All anaesthetists or intensivists with emergency and / or elective paediatric responsibility should have up to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management.</p>	N	This QS was met for paediatric life support. Competences in advanced paediatric airway management relied on individual consultants undertaking relevant CPD. Some anaesthetists on the on-call rota did not regularly anaesthetise children. Simulation training was planned to address this issue.
PG-207	<p><b>Elective Anaesthesia</b></p> <p>All anaesthetists involved in the elective surgical management of children should be familiar with current practice and the techniques necessary to provide safe care for children, including acute pain management.</p>	Y	Anaesthetists who regularly anaesthetised children had spent time at BCH PICU. Departmental CPD and audits were also in place that included paediatric anaesthesia topics.
PG-208	<p><b>Operating Department Assistance</b></p> <p>Operating department assistance from personnel trained and familiar with paediatric work and competences in basic paediatric resuscitation and life support should be available for all emergency and elective children's surgery. For hospitals accepting children with trauma, this includes competences in the care of children with trauma.</p>	N	A competency template was in place. The training of 14 of the 27 Operating Department Practitioners (ODPs) and theatre staff was out of date on the evidence available. This number would be higher than the real number if some training was had been recorded. Reviewers were told of some difficulties accessing appropriate training.
PG-209	<p><b>Recovery Staff</b></p> <p>At least one member of the recovery room staff with paediatric resuscitation and life support competences should be available for all children's operating lists.</p>	Y	
PG-401	<p><b>Induction and Recovery Areas</b></p> <p>Child-friendly paediatric induction and recovery areas should be available within the theatre environment.</p>	Y	The recovery area was shared with adults, but the area for children was clearly defined and screened. Paediatric equipment was available in these bays.
PG-402	<p><b>Day Surgery</b></p> <p>Children needing elective surgery should be admitted to a day surgery unit or a children's ward area specifically identified for children's day surgery.</p>	Y	

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PG-403	<p><b>Drugs and Equipment</b></p> <p>Appropriate drugs and equipment should be available in each area in which anaesthesia is delivered to children. Drugs and equipment should be checked in accordance with local policy.</p>	Y	Paediatric consumables and equipment were clearly identified.
PG-404	<p><b>GICU Paediatric Area</b></p> <p>The General Intensive Care Unit should have an appropriately designed and equipped area for providing paediatric critical care for children. Drugs and equipment appropriate to the age and condition of children who may be admitted (QS PM-506) should be available and checked in accordance with local policy.</p>	N	Reviewers were told by some staff that children aged 15 could go to the adult high dependency unit.
PG-501	<p><b>Role of Anaesthetic Service in Care of Critically Ill Children</b></p> <p>Protocols for resuscitation, stabilisation, accessing advice, maintenance and transfer and of critically ill children and the provision of paediatric critical care should be clear about the role of the anaesthetic service and General Intensive Care Unit (if applicable) in each stage of the child's care.</p>	Y	
PG-502	<p><b>GICU Care of Children</b></p> <p>If the maintenance guidelines in QS PM-506 include the use of a General Intensive Care Unit, they should specify:</p> <ol style="list-style-type: none"> <li>The circumstances under which a child will be admitted to and stay on the General Intensive Care Unit</li> <li>Availability of a registered children's nurse to support the care of the child and to review the child at least every 12 hours</li> <li>Discussion with a L3 PCC consultant about the child's condition prior to admission and regularly during their stay on the General Intensive Care Unit</li> <li>Agreement by a local paediatrician to the child being moved to the Intensive Care Unit</li> <li>Availability of a local paediatrician for advice</li> <li>Review of the child by a senior member of the paediatric team at least every 12 hours during their stay on the General Intensive Care Unit</li> <li>24 hour access for parents to visit their child</li> </ol>	N	Policies were not clear about admission of children aged 15 to the adult high dependency unit. Reviewers were told that this happened occasionally.

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PG-503	<p><b>Clinical Guidelines - Anaesthesia</b></p> <p>Clinical guidelines should be in use covering:</p> <ol style="list-style-type: none"> <li>Pain management for children</li> <li>Pre-operative assessment</li> <li>Preparation of all children undergoing general anaesthesia</li> <li>Difficult airway management</li> </ol>	N	Difficult airway management guidelines were available. Pain management and pre-operative assessment guidelines were in development.
PG-598	<p><b>Implementation of Trust Guidelines</b></p> <p>Staff should be aware of and following Trust guidelines:</p> <ol style="list-style-type: none"> <li>Surgery and anaesthesia for children (QS PC-502)</li> <li>Consent</li> <li>Organ and tissue donation</li> <li>Staff acting outside their area of competence</li> </ol>	N	As QS PC-598.
PG-601	<p><b>Liaison with Theatre Manager</b></p> <p>There should be close liaison between the lead consultant for paediatric anaesthesia (QS PG-201) and the Theatre Manager with regard to the training and mentoring of support staff.</p>	Y	
PG-602	<p><b>Children's Lists</b></p> <p>Wherever possible, elective surgery on children should be undertaken on dedicated operating lists for children. If dedicated lists are not feasible, children should be put at the start of lists with appropriately trained staff in the reception, anaesthetic room, theatre and recovery areas.</p>	Y	A process was in place and had been audited, although was not followed for the theatre list observed by reviewers. There may, however, have been good reasons for this departure from the expected process.
PG-701	<p><b>GICU Critical Care Minimum Data Set</b></p> <p>The critical care minimum data set collected and submitted to SUS should include data on children and young people admitted to the unit.</p>	N	Data were not collected on children admitted to the adult high dependency unit
PG-798	<p><b>Review and Learning</b></p> <p>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'.</p>	N	Multi-disciplinary review and learning involving all disciplines was not yet in place. Anaesthetics and surgery staff had joint audit meetings and joint morbidity and mortality review meetings. Theatre teams only attended these meetings if invited, and they had a separate review meeting.
PG-799	<p><b>Document Control</b></p> <p>All policies, procedures and guidelines and should comply with Trust document control procedures.</p>	Y	

## COMMISSIONING

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PZ-601	<p><b>Paediatric Critical Care Needs Assessment and Strategy</b></p> <p>Commissioners should have an agreed paediatric critical care:</p> <ol style="list-style-type: none"> <li>Needs assessment</li> <li>Strategy for the development of services across the Paediatric Critical Care Operational Delivery Network</li> </ol>	N	A review of paediatric critical care was being undertaken following the transfer of commissioning responsibility to specialised commissioning on 1st April 2017.
PZ-602	<p><b>Commissioning: Urgent Care for Children</b></p> <p>Urgent care for children from the network's population should be commissioned including:</p> <ol style="list-style-type: none"> <li>Emergency Centres</li> <li>Trauma services for children and their designation</li> <li>Children's Assessment Services</li> </ol>	N/A	Urgent care was not provided.
PZ-603	<p><b>Commissioning: Paediatric Critical Care</b></p> <p>Paediatric critical care services for the network population should be commissioned including:</p> <ol style="list-style-type: none"> <li>Level 1 paediatric critical care service/s</li> <li>Level 2 paediatric critical care service/s</li> <li>Level 3 paediatric critical care services/s</li> <li>Specialist Paediatric Transport Service, including whether commissioned for aeromedical transfers</li> <li>Extracorporeal membrane oxygenation (ECMO)</li> <li>Services for children needing long-term ventilation</li> <li>Paediatric Critical Care Operational Delivery Network/s</li> </ol> <p>The specification for each service should cover:</p> <ol style="list-style-type: none"> <li>Inclusions and exclusions in terms of age and conditions of children for which the service is responsible</li> <li>Interventions to be offered in each PCCU</li> <li>Key performance indicators</li> </ol>	Y	The Standard NHS contract was in place.

Ref	Quality Standards	Met? Y/N	Reviewer Comments
PZ-604	<p><b>Paediatric Critical Care Operational Delivery Network</b></p> <p>Commissioners should agree the catchment population, organisations involved and host organisation for the Paediatric Critical Care Operational Delivery Network/s within the area for which they are responsible.</p>	Y	A Paediatric Critical Care Operational Delivery Network was in place.
PZ-701	<p><b>Paediatric Critical Care Quality Monitoring</b></p> <p>Commissioners should monitor at least annually key performance indicators and aggregate data on activity and outcomes from each paediatric critical care service, including:</p> <p><b>L3 PCCU:</b> All instances of average occupancy exceeding 85% for more than two successive months</p> <p><b>SPTS:</b> Arrival at referring unit within three hours of the decision to transfer the child</p>	Y	Reviewers met only with specialised services commissioners. Quality dashboards were in place. Joint CCG / specialised services performance meetings took place with ROH on a regular basis. Good partnership working with the CCG in relation to contract management was evident.

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