WM QRS West Midlands Quality Review Service

NHS

West Midlands Paediatric Critical Care Network

Care of Critically Ill & Critically Injured Children Quality Review Visit

The Dudley Group NHS Foundation Trust

Visit Date: 25th 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 Critically Ill and Critically Injured Children that took place on 25th 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 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 The Dudley Group 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 Dudley Group NHS Foundation Trust
- NHS Dudley 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 Dudley 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 West Midlands Paediatric Critical Care Network would like to thank the staff and service users and carers of The Dudley Group 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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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), Children's Assessment Unit (CAU), inpatient and high dependency care at Dudley Group NHS Trust. Annual activity levels at the time of the review were 20,000 Children's Emergency Department (CED) attendances. Paediatric anaesthesia and surgery was not included in this review.

All staff who met with the reviewing team were enthusiastic and working hard to improve the services offered.

The adult intensive care team had participated in the regional acute paediatric training (RAPT) programme provided by Birmingham Women's and Children's Hospital NHS Foundation Trust.

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. The Standard Operating Procedure for paediatric admission to the Adult Intensive Care Unit was excellent and very clear. The policy was very detailed about the reasons for admission and outlined conditions when an admission was acceptable. Reviewers suggested that the Trust should present the policy and pathway more widely.
2. The In-hospital transfer policy was also comprehensive, including arrangements and equipment required for the transfer of children between areas.
3. The child and adolescent mental health service CAMHS pathway was very clear. Staff from the CAHMS service were available 24hrs a day, seven days a week. Trust staff were very appreciative of the quick response and support available from the team.

Immediate Risks

1. **Paediatric Early Warning System** [1]

   An electronic PEWS had been introduced to record vital signs to assist staff in the early identification of serious illness or deterioration of children attending the Trust. At the time of the visit reviewers observed that in the Emergency Department the data recorded was not available at the bedside for staff to review when assessing a sick child. Reviewers were told that the electronic devices purchased by the Trust to input the data did not have the connectivity as expected and were not used by staff at the bedside. Staff would input and then review any recordings at the nurse's station in the department. The system, as designed, did not provide staff with easy visibility of triggers for when a child's observations were outside of the parameters set for escalation. Reviewers were not assured that the system, as set up, gave information quickly enough or sufficient information on observational trends to identify deterioration of the sick child. There appeared to be inconsistency in how staff used PEWS data and a general lack of confidence in the electronic system.

[1] **Trust response:** Action Plan: 1. Each cubicle space has a computer to allow data to be recorded. 2 HDU area will have a laptop computer in each bed space to allow for data entry. Connectivity for the tablets to be tested across C2 to ensure it is effective. Multi-parameter observations can be viewed on laptops therefore one to be placed in each HDU space and cubicle. All nursing staff to be retrained for PEWS. Competency framework to be completed for all staff. All staff to have crib cards to support decision making. Visual display of PEWS escalation in C2 and Paeds ED
WMQRS Response: The actions, once fully implemented, will address the immediate risk.

Concerns

1. **Resuscitation Training Records**

   Reviewers were concerned about resuscitation records for the following reasons:

   a. Evidence was not available to assure reviewers that all ED consultants and ED middle grade staff had up to date advanced paediatric resuscitation and life support competences and had undertaken continued professional development of relevance to their work with critically ill and critically injured children.

   b. Evidence was not accessible to confirm that all staff in the CED had the relevant resuscitation competences and that at least one nurse with up to date advanced paediatric resuscitation and life support competences was rostered on each shift

   c. Details of resuscitation training undertaken outside the Trust were not easily available to managers. Reviewers did not see evidence to assure them that staff with appropriate and up to date resuscitation training was on duty at all times.

2. **Awareness of Grab Bags**

   a. Staff who met with the reviewing team were not clear about the arrangements, including whose responsibility it was, for transporting the paediatric grab bag should an emergency occur in a non-paediatric clinical area.

   b. Not all staff who met with the reviewers were aware that there was a grab bag in the Emergency Department. Some staff told the reviewers that equipment would be 'gathered' and placed on the child's bed as required or if it was a time critical transfer then the ITU staff would bring the emergency transfer bag from ITU.

3. **Policy for Time Critical Transfer**

   A policy covering 'time critical' transfers was not yet in place. Guidelines did not cover those children where emergency transfer was time-critical, when waiting for the KIDS Intensive Care and Decision Support team to arrive may introduce unsafe delay, and Trust staff would be required to transfer the child. The guidelines did include the transfer of the critically ill children who were deemed not 'time critical'.

4. **Medical Staffing**

   Ten consultants covered the paediatric service providing cover for a 1:11 week rota due to vacancies, though the Trust had appointed to the 11th consultant post. Consultant staff were rostered to work till 7pm with plans to extend this to 9pm and then on-call overnight. The Trust also operated a joint rota between the paediatrics and neonatal services for consultant and middle-grade staff, which also contributed to a high workload for staff. Reviewers were particularly concerned that the level of workload was not sustainable in the long-term, especially as the consultants would also have clinical commitments the following day. This issue had been raised and was documented on the Trust risk register and reviewers were made aware that the Royal College of Paediatrics and Child Health had been consulted on the feasibility of the Trust providing a separate rota for the paediatric and neonatal services.

Further Consideration

1. Paediatric resuscitation trolleys were not standardised across the ED and Ward. In the ED the trolley included both adult and paediatric equipment. The checklists for checking resuscitation equipment was also not standardised across the areas and reviewer suggested that standardising the checklist should be considered.

2. The Children's Services Group responsible for the coordination and development of care of critically ill and critically injured children across the Trust did not include the Board level lead. A Trust allied health professional lead for the care of children had not yet been identified.

3. The registered nurse competence framework (2013) would benefit from review and updating to reflect the Royal College of Paediatrics and Child Health *'High Dependency Care for Children, Time To Move On'* recommendations.
4. Inter-hospital guidelines would benefit from review to include the drugs and equipment required, restraint of children, and monitoring during transfer.

CHILDREN'S EMERGENCY DEPARTMENT

General Comments and Achievements

See Trust-wide section of the report

Good Practice

1. The Grab bag in use in the ED was very good with key equipment stored in different compartment bags so that if only airway or circulation equipment was required it was very quickly accessible.
2. See Trust-wide section of the report Level 2 numbers

Immediate Risks: See Trust-wide section of the report

Concerns

1. **Children's Trained Nurses**

   At the time of the visit the CED had two children's trained nurses out of an establishment of four. The nurses covered triage, minor injuries and the resuscitation area and therefore staffing was insufficient for the department to meet the expected standards of one children's trained nurse in the department.
2. See Trust-wide section of the report

Further Consideration

1. The Emergency Department did not have play therapy or distraction support staff available daily as expected for a department seeing more than 16,000 attendances per year.
2. See Trust-wide section of the report.

CAU, INPATIENT WARD AND PAEDIATRIC HIGH DEPENDENCY UNIT

General Comments and Achievements

All inpatient care was provided on the inpatient ward (C2). Staff clearly worked well together and the environment on the ward was bright and welcoming.

See also trust-wide section of the report

Good Practice

1. The intubation mat in the stabilisation room was very good with a pictorial map for placing equipment so that the right equipment was easily accessible in an emergency.
2. Reviewers were impressed with the work that the service had accomplished in helping reduce children's anxiety due to admission to hospital and the use of 'Therapy Dog' visits to the ward.
3. The ward information board was very well organised particularly around the clarity of information about key performance indicators.
4. See Trust-wide section of the report

Immediate Risks: see Trust-wide section of the report

Concerns

1. **Nurse staffing for in-patient ward and high dependency care**[2]

   The ward had 42 beds with three beds designated for HDU care which could be a combination of three beds or one cubicle and two beds at times of peak demand and often high dependency care was provided in an additional cubicle. At the time of the visit, staffing levels for the ward were 7:2 registered to non-registered staff the day and 6:1 registered to non- registered staff at night, although there was an escalation plan to increase staffing at peak demand. Reviewers considered that the staffing establishment was insufficient to provide 1:1 and 1:2 care within the existing staffing establishment, especially when there were more than three HDU patients. Reviewers were told that a workforce plan had been submitted to increase staffing to enable the ward to meet the standards outlined in the RCN (2013) *Defining Staffing Levels for Children & Young Peoples' Services* document.

2. See Trust-wide section of the report

Further Consideration

1. See Trust-wide section of the report

EXISTING HDU CARE AND PLANS FOR THE FUTURE

As part of the visit the WMPCCN were keen to hear from staff about their views of the future delivery of critical care for children across the region.

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 for children up to 15months. Paediatric Surgery was provided at the Trust for some ear, nose and throat conditions, ophthalmology, some plastic surgery, and for children with hypospadias.

The Trust team had not fully considered their position for delivering more complex level 2 care, but any increase in dependency would require appropriate commissioning and workforce investment (particularly nurse staffing).

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[2] Awaiting Trust response to ward staffing as evidence available related to when 8 beds were closed.

APPENDIX 1 MEMBERSHIP OF VISITING TEAM

Visiting Team		
Dr Andrea Cooper	PICU Consultant and Consultant on the Transport Team (KIDS)	Birmingham Women's and Children's NHS Foundation Trust - Birmingham Children's Hospital
Aimee Haynes	Network Governance Administrator	KIDS/NTS Retrieval Service; Birmingham Women's and Children's NHS Foundation Trust
Julie Plant	Senior Matron, Children's Services Directorate	The Royal Wolverhampton NHS Trust
Alison Warren	Clinical Matron for Children and Young People's Services & Nursing Lead for Resuscitation	The Royal Orthopaedic Hospital NHS Foundation Trust

WMQRS Team		
Sarah Broomhead	Assistant Director	West Midlands Quality Review Service

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APPENDIX 2 COMPLIANCE WITH THE QUALITY STANDARDS

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

Table 1 - Percentage of Quality Standards met

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

Service	Number of Applicable QS	Number of QS Met	% met
Hospital-wide	10	7	70
Emergency Department	21	11	52
Children's Assessment Service	23	20	87
Integrated IP & L1PCCU – Ward C2	30	24	80
Health Economy	**84**	**62**	**74**

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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	N	An AHP lead had not yet been nominated. All other clinical leads had been identified.
HW-203	**Hospital Wide Group** Hospitals providing hospital services for children should have a single group responsible for the coordination and development of care of critically ill and critically injured children. The membership of this group should include all nominated leads (QS HW-202) and the Resuscitation Officer with lead responsibility for children. The accountability of the group should include the Hospital Lead for children's services (QS HW-201). The relationship of the group to the Trust's mechanisms for safeguarding children and clinical governance issues relating to children should be clear.	N	The Trust had a children's services group chaired by the Matron for Paediatrics & Neonates, but the Board level lead for children was not included in the membership.

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	Y	
HW-205	**Consultant Anaesthetist 24 Hour Cover** A consultant anaesthetist with up to date competences in advanced paediatric resuscitation and life support and advanced paediatric airway management who is able to attend the hospital within 30 minutes and does not have responsibilities to other hospital sites should be available 24/7.	Y	
HW-206	**Other Clinical Areas** Staff in other clinical areas where children may be critically ill, such as imaging and paediatric out-patient departments, should have basic paediatric resuscitation and life support training.	Y	
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	

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	Guidelines covering palliative care, bereavement or for staff acting outside their area of competence were not yet in place.
HW-602	**Paediatric Critical Care Operational Delivery Network Involvement** At least one representative from the Trust should attend each meeting of the Paediatric Critical Care Operational Delivery Network. Information about the work of the network should be disseminated to all staff involved in the provision of critical care for children	Y	

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EMERGENCY DEPARTMENT

Ref	Standard	Met?	Reviewer's comments
ED-201	**Lead Consultant and Lead Nurse** A nominated lead consultant and lead nurse should be responsible for staffing, training, guidelines and protocols, governance and for liaison with other services. The lead nurse should be a senior children's nurse. The lead consultant and lead nurse should undertake regular clinical work within the service for which they are responsible.	Y	
ED-202	**Consultant Staffing** a. A consultant who is able to attend the hospital within 30 minutes and who does not have responsibilities to other hospital sites should be available 24/7 b. All consultants should have up to date advanced paediatric resuscitation and life support competences and should undertake CPD of relevance to their work with critically ill and critically injured children	N	From the evidence seen it was not clear if all ED consultants had up to date competences as defined by 'b' in the QS. See also main report.
ED-203	**'Middle Grade' Clinician** A 'middle grade' clinician with the following competences should be immediately available at all times: a. Advanced paediatric resuscitation and life support b. Assessment of the ill child and recognition of serious illness and injury c. Initiation of appropriate immediate treatment d. Prescribing and administering resuscitation and other appropriate drugs e. Provision of appropriate pain management f. Effective communication with children and their families g. Effective communication with other members of the multi-disciplinary team, including the on-duty consultant A clinician with at least Level 1 RCPCH (or equivalent) competences and experience should be immediately available. Doctors in training should normally be Specialist Trainee 4 (ST4) or above. Larger hospitals with several wards or departments caring for children will require more than one clinician with these competences on site 24/7.	N	From the evidence seen it was not clear if all ED middle grade staff had up to date competences as defined by 'b' in the QS. See also main report.

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	Evidence was not accessible to confirm that all staff in the CED had the relevant resuscitation competences 'a'
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	Out of an establishment of four registered children's nurses, two posts were vacant and therefore a registered children's nurse was not on duty at all times.

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)	N	
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	
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	In the CED, the trolley included both adult and paediatric equipment.
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.	Y	
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.	N	See main report
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	Guidance for sepsis and nasal high-flow therapy were in the process of being reviewed. Guidelines were not in place for cardiac arrhythmia, burns and upper airway obstruction. Some guidance was also included in the paediatrics in partnership (PIP) guideline book .

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	N	The guidelines did not include the drugs and equipment required, restraint of children and monitoring during transfer

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	The guidelines did not include the detail for time critical transfers. Transfer of the critically ill child was included.
ED-798	**Review and Learning** The service should have appropriate multi-disciplinary arrangements for review of, and implementing learning from, positive feedback, complaints, morbidity, mortality, transfers and clinical incidents and 'near misses'.	Y	

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CHILDREN'S ASSESSMENT SERVICE

Ref	Standard	Met?	Reviewer's comments
CA-201	**Lead Consultant and Lead Nurse** A nominated lead consultant and lead nurse should be responsible for staffing, training, guidelines and protocols, governance and for liaison with other services. The lead nurse should be a senior children's nurse. The lead consultant and lead nurse should undertake regular clinical work within the service for which they are responsible.	Y	
CA-202	**Consultant Staffing** a. A consultant who is able to attend the hospital within 30 minutes and who does not have responsibilities to other hospital sites should be available 24/7 **b.** All consultants should have up to date advanced paediatric resuscitation and life support competences and should undertake CPD of relevance to their work with critically ill and critically injured children	Y	
CA-203	**'Middle Grade' Clinician** A 'middle grade' clinician with the following competences should be immediately available at all times: a. Advanced paediatric resuscitation and life support b. Assessment of the ill child and recognition of serious illness and injury c. Initiation of appropriate immediate treatment d. Prescribing and administering resuscitation and other appropriate drugs e. Provision of appropriate pain management f. Effective communication with children and their families g. Effective communication with other members of the multi-disciplinary team, including the on-duty consultant A clinician with at least Level 1 RCPCH (or equivalent) competences and experience should be immediately available. Doctors in training should normally be ST4 or above. Larger hospitals with several wards or departments caring for children will require more than one clinician with these competences on site 24/7.	Y	

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

Ref	Standard	Met?	Reviewer's comments
CA-209	**Other Staffing** The following staff should be available: a. Appropriately qualified staff to provide support for play, mental stimulation and distraction during procedures (7/7) b. On-call access to pharmacy and physiotherapy services able to support the care of children (24/7) c. Access to dietetic service (at least 5/7) d. Access to a liaison health worker for children with mental health needs (7/7) **e.** Access to staff with competences in psychological support (at least 5/7)	Y	
CA-301	**Imaging Services** 24 hour on site access to imaging services should be available including ultrasound and CT scanning, with reporting available within one hour. Arrangements for access to MRI should be in place. If staff with competences in reporting imaging of children are not available 24/7 then the Hospital should have arrangements for review of imaging by a paediatric radiologist.	Y	
CA-401	**Resuscitation Equipment** An appropriately designed and equipped area, or adequate mobile equipment, for resuscitation and stabilisation of critically ill children of all ages should be available. Drugs and equipment should be checked in accordance with local policy.	Y	
CA-402	**'Grab Bag'** Appropriate drugs and equipment for in-hospital and time-critical transfers should be immediately available and checked in accordance with local policy.	Y	
CA-406	**'Point of Care' Testing** 'Point of care' testing for blood gases, glucose, electrolytes and lactate should be easily available.	Y	
CA-501	**Initial Assessment** A protocol should be in use which ensures a brief clinical assessment within 15 minutes of arrival, including a pain score (where appropriate), and a system of prioritisation for full assessment if waiting times for full assessment exceed 15 minutes.	Y	
CA-502	**Paediatric Early Warning System** A system to provide early warning of deterioration of children should be in use. The system should cover observation, monitoring and escalation of care.	Y	

Ref	Standard	Met?	Reviewer's comments
CA-503	**Resuscitation and Stabilisation** Hospital-Wide protocols for resuscitation and stabilisation should be in use, including: a. Alerting the paediatric resuscitation team b. Arrangements for accessing support for difficult airway management c. Stabilisation and ongoing care **d.** Care of parents during the resuscitation of a child	Y	
CA-504	**Paediatric Advice** Guidelines on accessing advice from the local paediatric service and local paediatric critical care service should be in use in units where children are not under the care of a paediatrician.	Y	
CA-505	**Clinical Guidelines** The following clinical guidelines should be in use: **All:** **a.** Treatment of all major conditions, including: i. acute respiratory failure (including bronchiolitis and asthma) ii. sepsis (including septic shock and meningococcal infection) iii. management of diabetic ketoacidosis iv. seizures and status epilepticus v. trauma, including traumatic brain injury, spinal injury and rehabilitation of children following trauma (if applicable) vi. burns and scalds vii. cardiac arrhythmia viii. upper airway obstruction b. Management of acutely distressed children, including use of restraint c. Drug administration and medicines management d. Pain management e. Procedural sedation and analgesia f. Infection control and antibiotic prescribing **g.** Tissue viability, including extravasation h. Nasal high flow therapy (if used) **i.** Management of children undergoing surgery (if applicable)	N	Guidance for sepsis and nasal high-flow therapy were in the process of being reviewed. Guidelines were not in place for cardiac arrhythmia, burns and upper airway obstruction. Some guidance was also included in the paediatrics in partnership (PIP) guideline book.

Ref	Standard	Met?	Reviewer's comments
CA-506	**PCC Transfer Guidelines** Guidelines on referral to a Specialist Paediatric Transport Service should be in use, covering at least: a. Accessing advice from a Specialist Paediatric Transport Service and providing full clinical information b. Ensuring decisions on whether a child needs to be transferred are taken by the appropriate local consultant together with the Specialist Paediatric Transport Service **c.** Local guidelines on the maintenance of paediatric critical care until the child's condition improves or the SPTP arrives. These guidelines should stipulate the location/s in which children may be maintained	Y	
CA-507	**In-hospital Transfer Guidelines** Guidelines on transfer of seriously ill children within the hospital (for example, to or from imaging or theatre) should be in use. The guidelines should specify the escort arrangements and equipment required.	Y	
CA-508	**Inter-hospital Transfer Guidelines** Guidelines on transfer of children between hospitals or between hospital sites should be in use covering at least: a. Types of patients transferred b. Composition and expected competences of the escort team c. Drugs and equipment required d. Restraint of children, equipment and staff during transfer **e.** Monitoring during transfer	N	The guidelines did not include the drugs and equipment required, restraint of children and monitoring during transfer.

Ref	Standard	Met?	Reviewer's comments
CA-509	**Time-Critical Transfer Guidelines** Guidelines should be in place for situations where emergency transfer is time-critical and waiting for the SPTS to arrive may introduce unsafe delay, for example, severe head injury, intracranial bleeding, severe thoracic vascular trauma, burns and some intra-abdominal emergencies. The guidelines should include: a. Securing advice from the Specialist Paediatric Transport Service (QS CA-506) b. Escort team of at least two clinical staff with appropriate training and experience. The referring consultant and senior nurse on duty should judge the appropriateness of the escorts who would normally be senior clinicians with experience and / or training in a) care of the critically ill child, b) emergency transfer and c) advanced airway management c. Indemnity for escort team d. Availability of drugs and equipment, checked in accordance with local policy (QS CA-402) e. Arrangements for emergency transport with a local ambulance service and the air ambulance **f.** Arrangements for ensuring restraint of children, equipment and staff during transfer	N	The guidelines did not include the detail for time critical transfers. Transfer of the critically ill child was included.

Ref	Standard	Met?	Reviewer's comments
CA-601	**Operational Policy** The service should have an operational policy covering at least: a. Individualised management plans are accessible for children who have priority access to the service (where applicable) b. Informing the child's GP of their attendance / admission c. Level of staff authorised to discharge children d. Arrangements for consultant presence during 'times of peak activity' (7/7) e. Servicing and maintaining equipment, including 24 hour call out where appropriate f. Arrangements for a consultant-led rapid access service which can see children within 24 hours of referral g. Arrangements for admission within four hours of the decision to admit h. Types of patient admitted i. Review by a senior clinician within four hours of admission j. Review by a consultant within 14 hours of admission and at least two consultant-led clinical handovers every 24 hours k. Handover of patients at each change of responsible consultant, non-consultant medical staff, nursing staff and other staff **l.** Discussion with a senior clinician prior to discharge	Y	
CA-703	**Audit and Quality Improvement** The service should have a rolling programme of audit, including at least: a. Audit of implementation of evidence based guidelines (QS CA-500s) b. Participation in agreed national and network-wide audits **c.** Use of the 'Urgent and Emergency Care Clinical Audit Toolkit' to review individual clinical consultations	Y	'c' was not applicable
CA-704	**Key Performance Indicators** Key performance indicators should be reviewed regularly with Hospital (or equivalent) management and with commissioners.	Y	

Ref	Standard	Met?	Reviewer's comments
CA-798	**Review and Learning** The service should have appropriate multi-disciplinary arrangements for review of, and implementing learning from, positive feedback, complaints, morbidity, mortality, transfers and clinical incidents and 'near misses'.	Y	

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INTEGRATED IN-PATIENTS & L1 PAEDIATRIC CRITICAL CARE

Ref	Standard	Met?	Reviewer's comments
L1-101	**Child-friendly Environment** Children should be cared for in a defined safe and secure child-friendly environment, with age-appropriate stimulation and distraction activities.	Y	
L1-102	**Parental Access and Involvement** Parents should: a. Have access to their child at all times except when this is not in the interest of the child and family or of the privacy and confidentiality of other children and their families b. Be informed of the child's condition, care plan and emergency transfer (if necessary) and this information should be updated regularly c. Have information, encouragement and support to enable them fully to participate in decisions about, and in the care of, their child	Y	
L1-201	**Lead Consultant and Lead Nurse** A nominated lead consultant and lead nurse should be responsible for staffing, training, guidelines and protocols, governance and for liaison with other services. The lead nurse should be a senior children's nurse. The lead consultant and lead nurse should undertake regular clinical work within the service for which they are responsible.	Y	
L1-202	**Consultant Staffing** a. A consultant who is able to attend the hospital within 30 minutes and who does not have responsibilities to other hospital sites should be available 24/7 b. All consultants should have up to date advanced paediatric resuscitation and life support competences and should undertake CPD of relevance to their work with critically ill and critically injured children	Y	

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	N	Staffing was insufficient to provide 1:1 and 1:2 care within the existing staffing establishment, especially when there were more than 3 HDU patients. Reviewers were told that a workforce plan had been submitted to increase staffing to enable the ward to meet the standards outlined in the RCN (2013) Defining Staffing Levels for Children & Young Peoples' Services document.

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.	N	The induction programme did not include 75 hours supervised practice. The PDN was on leave but would provide support for new starters
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	
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	

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	Guidance for sepsis and nasal high-flow therapy were in the process of being reviewed. Guidelines were not in place for cardiac arrhythmia. burns and upper airway obstruction. Some guidance was also included in the Paediatrics in Partnership (PIP) guideline book.
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	N	The guidelines did not include the drugs and equipment required, restraint of children and monitoring during transfer.
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	The guidelines did not include the detail for time critical transfers. Transfer of the critically ill child was included.

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)	N	Data were not collected and submitted as required by the Qs, however plans were in place to achieve this.
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	

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