

Care of Critically Ill & Critically Injured Children in the West Midlands

Heart of England NHS Foundation Trust

Visit Date: 3rd and 4th October 2013

Report Date: December 2013

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INTRODUCTION

This report presents the findings of the review of the care of critically ill and critically injured children at Heart of England NHS Foundation Trust which took place on 3rd and 4th October 2013. The purpose of the visit was to review compliance with West Midlands Quality Review Service (WMQRS) Quality Standards for:

- Care of Critically Ill & Injured Children in the West Midlands, Version 4, March 2013

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 which reviewed the services at Heart of England 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:

- Heart of England NHS Foundation Trust
- NHS Solihull Clinical Commissioning Group
- NHS Birmingham CrossCity 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 Solihull Clinical Commissioning Group

ABOUT WEST MIDLANDS QUALITY REVIEW SERVICE

WMQRS was set up as a collaborative venture by 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 would like to thank the staff and service users and carers of Heart of England 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

This review looked at the care of critically ill and critically injured children in the Emergency Departments at Good Hope Hospital, Birmingham Heartlands Hospital and Solihull Hospital. These departments saw approximately 14,000, 28,000 and 10,000 children per annum respectively. Children's assessment services at both Good Hope and Birmingham Heartlands Hospitals were reviewed which had observation beds for patients to stay for up to 24 hours. At Birmingham Heartlands Hospital this comprised a six-bedded assessment area, two isolation cubicles and a four-bedded observation area. Eighteen in-patient beds, eight of which were isolation cubicles, and four high dependency beds at Birmingham Heartlands Hospital also supported the care of children from across the Trust's catchment area. The day surgery ward at Birmingham Heartlands Hospital was situated on the ground floor of the paediatric unit and admitted medical and surgical day cases.

TRUST-WIDE

General Comments and Achievements

Good Practice

- 1 Information leaflets were clear, comprehensive and available on-line. This meant that they were tailored to the patients' needs, individually named for them, and the patients' notes recorded what information had been given to them.
- 2 All drugs and equipment on the resuscitation trolleys were well-organised and bar-coded. Resuscitation officers could therefore monitor electronically when drugs and equipment were approaching their 'use by' date.
- 3 Paediatric guidelines were clear, well organised and easy to use. An Emergency Department version of the guidelines included relevant information, for example, about minor injuries.

Immediate Risks: No immediate risks were identified.

Concerns

1 Training Records

During the course of the review it was not clear whether medical staff in the Emergency Department, paediatric service and anaesthesia had appropriate competences in resuscitation and stabilisation of critically ill children or in child safeguarding. It was also not clear whether adult nurses in the Emergency Department had appropriate competences in the care of children. (Training records for children's trained nurses in the Emergency Departments were seen but a children's trained nurse was not always on duty.) Staff tried hard to find this information but with patchy results. Some information was available but was three months out of date. The resuscitation team could provide information on in-house training but not on training such as APLS undertaken outside the Trust. The lead anaesthetist for children had no way of knowing whether other consultants had appropriate competences for work with children. Reviewers were also given conflicting information about the training needed for locum middle grade doctors in Emergency Departments. Some staff said that APLS was required whereas others that ALS and PLS were expected.

Reviewers concluded that service managers did not have the access to update information about training and competences which they needed to manage the services for which they were responsible.

2 Transfers

Several aspects of the transfer of children were of concern to reviewers:

- a. Transfer bags were not sealed and reviewers were given inconsistent information as to whether they were checked weekly or monthly. Reviewers were given examples of equipment not being available when required. Different drugs and equipment were in the transfer bags in each area.

- b. The Trust Transfer Policy did not specify the drugs and equipment which should be taken on a transfer.
- c. Reviewers were told of delays in ambulance transfers of children from Good Hope and Solihull Hospitals to Birmingham Heartlands Hospital, because the ambulance service considered the child was in a 'place of safety'. A monitoring protocol was in place with clear criteria for escalation if necessary. Reviewers were concerned that a child's condition could deteriorate while waiting and difficulties may occur which could have been prevented by an earlier transfer. The number of children affected would be likely to increase during winter months. The Trust was aware of this problem and was considering possible options.

3 Trust-wide Group

The Trust did not have a Trust-wide group looking at the care of children in all settings. There was a 'Women's and Children's Directorate' as part of the management structure but no forum which brought paediatric services together with, for example, anaesthetists, surgeons, imaging and resuscitation officers. Such a group could also be used to bring together staff working on different hospital sites.

Further Consideration

- 1 Reviewers suggested that it may be helpful to standardise the contents of transfer bags and their checking arrangements, seal and bring them under the oversight of the resuscitation team, in the same way as resuscitation trolleys.
- 2 The Emergency Department and paediatric services had access to appropriate imaging for children, but were concerned about some aspects of the services received. In particular, reviewers were told that reports often included many caveats and recommendations for review by a paediatric radiologist. This resulted in a delay while waiting for a second opinion. Paediatric staff were also concerned that images from other hospitals were retained for only three months and so were not available to review after that time. Further work with imaging services may help to streamline patient pathways and increase levels of satisfaction with imaging services.
- 3 A policy for adult nurses acting outside their area of competence was in place but not a general policy covering all staff caring for children. Reviewers suggested that development of the existing policy could lead to a Trust-wide policy relatively easily.
- 4 The Trust Transfer Policy did not cover restraint of children or equipment.
- 5 Resuscitation trolleys were not sealed. This may be useful as the frequency with which the trolley needs to be checked can then be reduced. Making clear that other items should not be added to the trolley may also be helpful.
- 6 The Trust was considering commissioning an ambulance for transfer between hospitals. Reviewers suggested that liaison with 'KIDS' should also be explored as this could be mutually beneficial.
- 7 Paediatric consultants at Good Hope Hospital were having less experience of the management of critically ill children. Reviewers suggested that the need for skills maintenance should be specifically addressed through the appraisal process.

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EMERGENCY DEPARTMENTS

Many comments in the Trust-wide section of this report apply to all services and so are not duplicated here.

GOOD HOPE HOSPITAL

General Comments and Achievements

The paediatric Emergency Department was well laid out and separate from adult patients. The Department was well organised with all equipment clearly identified and readily available. Facilities for parents were good. There was a robust electronic system of alerts and clear white board information about children in the Department. A clear and concise 'SBAR' transfer form was in use.

Good Practice

- 1 The paediatric resuscitation area was separate from the area for adults.

Immediate Risks: No immediate risks were identified.

Concerns

1 Multi-disciplinary review and learning

Multi-disciplinary arrangements for review and learning about the care of children were not in place.

- 2 **Training records:** See Trust-wide section of this report. In particular, reviewers were not assured that all medical staff had appropriate up to date competences in resuscitation and stabilisation, and that a clinician with advanced resuscitation skills was on duty at all times.

- 3 **Transfer:** See Trust-wide section of this report.

Further Consideration

- 1 Reviewers were told that initial assessment, including a pain score, was undertaken but there were no documented guidelines covering this process.
- 2 The Departmental documentation did not make clear when an Emergency Department or paediatric consultant should be called.

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BIRMINGHAM HEARTLANDS HOSPITAL

General Comments and Achievements

The paediatric area within the Emergency Department was well organised and the team had created an open and friendly environment for patients with a separate area for adolescents. The lead nurse in the paediatric area had good support from the main Emergency Department, particularly when critically ill children were admitted to the general resuscitation bay. There was a separate paediatric resuscitation trolley and medication cupboard.

Good Practice

- 1 Play was recognised as being very important and there was a designated play specialist available in the paediatric Emergency Department during the week who worked with the patient and siblings, where necessary.

Immediate Risks: No immediate risks were identified

Concerns

1 'Streaming' and Initial Assessment

On the day of the visit, reviewers were seriously concerned about the arrangements for streaming and initial assessment. Children attended the general reception area where they were directed to the

paediatric area. If the receptionist was very concerned about a child, they would be directed straight to the adult resuscitation area. The corridor to the paediatric area was long and there was no system of knowing that children who had been directed to the paediatric area had actually arrived. A policy on initial assessment was in place but reviewers looked at four sets of notes, none of which included evidence of the initial assessment policy being followed. Reviewers were concerned that the combination of these issues could lead to delays in a child seeing a clinician. Measures were put in place immediately to remind staff of the initial assessment policy. Reviewers recommended that implementation of the new arrangements should be subject to regular monitoring.

2 Multi-disciplinary review and learning

Multi-disciplinary arrangements for review and learning about the care of children were not in place.

3 Training records: See Trust-wide section of this report. In particular, reviewers were not assured that all medical staff had appropriate up to date competences in resuscitation and stabilisation, and that a clinician with advanced resuscitation skills was on duty at all times.

4 Transfer: See Trust-wide section of this report.

Further Consideration

1 Consultant paediatricians at Birmingham Heartlands Hospital were covering two hospital sites. When required to attend Solihull, Birmingham Heartlands Hospital patients were covered by a consultant neonatologist.

2 The long corridor to the paediatric area was not separate from adult patients.

3 The paediatric resuscitation trolley was not standardised with other paediatric trolleys. It may be helpful to consider standardisation to ensure familiarity with equipment for all paediatric staff.

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SOLIHULL HOSPITAL

General Comments and Achievements

The Trust had made strenuous efforts to ensure the safety of children and young people attending Solihull Hospital, despite this not being a place they would recommend children to attend. The Trust had worked with health visitors, midwives and teachers to encourage families not to bring children to Solihull Hospital. The Trust provided a minor injuries service for children but signage to the hospital did not reflect the service provided. Ambulances did not bring children to the Department. Despite these measures, approximately 10,000 children and young people attended Solihull Hospital Emergency Department each year.

The children's area within the Emergency Department was small but adequate and there was a well organised resuscitation area. A training programme in caring for children was in place for adult trained nurses within the Emergency Department.

Immediate Risks: No immediate risks were identified.

Concerns

1 On-site staff with paediatric competences

Reviewers were seriously concerned that appropriate medical and nursing staff with competences in the care of seriously ill children were not always available on site. In particular:

- a. A clinician with competence in advanced paediatric life support was not available at all times
- b. 24 hour cover by a clinician with competences and experience in assessment of the ill child and recognition of serious illness and injury, initiation of appropriate immediate treatment, prescribing

and administering resuscitation and other appropriate drugs, provision of appropriate pain management and effective communication with children and their families was not available.

The Trust considered that a minor injury service for children was provided and had worked hard with the local community to explain and publicise this. It was not, however, clearly indicated on signage within the hospital site.

2 **Multi-disciplinary review and learning**

Multi-disciplinary arrangements for review and learning about the care of children were not in place.

3 **Training records:** See Trust-wide section of this report. In particular, reviewers were not assured that all medical staff had appropriate up to date competences in resuscitation and stabilisation, and that a clinician with advanced resuscitation skills was on duty at all times.

4 **Transfer:** See Trust-wide section of this report.

Further Consideration

1 Consultant paediatricians at Birmingham Heartlands Hospital were covering two hospital sites. When required to attend Solihull, Birmingham Heartlands Hospital patients were covered by a consultant neonatologist.

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PAEDIATRIC SERVICES

Many comments in the Trust-wide section of this report apply to all services and so are not duplicated here.

GOOD HOPE HOSPITAL – CHILDREN’S ASSESSMENT UNIT

General Comments and Achievements

Good progress had been made in improving the care for children, including a good resuscitation board, appropriate equipment and a well-laid out resuscitation room.

Good Practice

1 A consultant from the Children’s Assessment Unit was available to talk to GPs until 9.00pm each day.

Immediate Risks: No immediate risks were identified.

Concerns

1 **Training records:** See Trust-wide section of this report. In particular, reviewers were not assured that all medical staff had appropriate up to date competences in resuscitation and stabilisation, and that a clinician with advanced resuscitation skills was on duty at all times.

2 **Transfer:** See Trust-wide section of this report.

Further Consideration

1 Reviewers were told that initial assessment, including a pain score, was undertaken but there were no documented guidelines covering this process.

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BIRMINGHAM HEARTLANDS HOSPITAL (BHH) IN-PATIENT, HIGH DEPENDENCY and PAEDIATRIC ASSESSMENT SERVICES, DAY SURGERY WARD

General Comments and Achievements

The paediatric ward, paediatric assessment unit, high dependency unit and day case ward were well-organised and benefitted from being closely located. This arrangement enabled good communication between these services. Plans to introduce supernumerary ward sisters were being developed. The critical care outreach team actively supported the high dependency unit.

Staff were very knowledgeable about monitoring and escalation policies and procedures should a child's condition deteriorate. There were good links with the *KIDS* team and staff were supported by a good IT infrastructure.

Families who met reviewers during the visit were very appreciative of the care and attention that their children were receiving. Feedback from junior medical staff was also very good and appreciative of the easily available consultant support.

Some dedicated paediatric surgery lists were in place and there were plans to turn an existing adult theatre in the hospital into a dedicated paediatric unit.

Good Practice

- 1 Resuscitation trolley – see Trust-wide section

Immediate Risks: No immediate risks were identified.

Concerns

1 Resuscitation Trolley

The in-patient resuscitation trolley had fluids and equipment additional to those expected. Changes were made during the course of the visit and the Trust should monitor to ensure revised arrangements have been fully implemented. Also, the trolley was in a corridor and was not locked or sealed. It would therefore be easy for staff to take equipment for routine use, resulting in it not being available in an emergency.

- 2 **Training records:** See Trust-wide section of this report. In particular, reviewers were not assured that all medical staff had appropriate up to date competences in resuscitation and stabilisation.

- 3 **Transfer:** See Trust-wide section of this report.

Further Consideration

- 1 Nurse staffing levels on the in-patient ward were supposed to be four registered nurses plus one non-registered nurse. This level was not achieved on approximately 50% of the shifts whose rotas were seen by reviewers. The ward had several cubicles and the Trust should ensure sufficient staff are available to observe children in these cubicles, especially when there are less than four registered nurses. The ward usually had 18 beds, four of which were in cubicles.

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PAEDIATRIC ANAESTHESIA (TRUST-WIDE)

Elective in-patient surgery, day case surgery and emergency surgery were performed at Birmingham Heartlands Hospital. At Good Hope Hospital elective in-patient surgery was performed in children over three years old, including occasional orthopaedic procedures. Emergency surgery was performed in children aged over five years in general surgery and trauma. At Solihull, ophthalmic and dental day case procedures were carried out in children aged over one year. No emergency surgery was performed on children at Solihull.

Many comments in the Trust-wide section of this report apply to all services and so are not duplicated here.

Good Practice, General Comments and Achievements

Anaesthetists were positively supporting resuscitation and care of critically ill children. They were trying hard to develop services for children, including planning for a paediatric theatre at Birmingham Heartlands Hospital and improved arrangements for the care of children. The Trust lead anaesthetist for children was committed to taking forward this work and had set up a theatre user group specifically for children.

The Solihull team were making the experience as child-friendly as possible for children operated on there. A good pre-operative assessment checklist became the child's care plan. Anaesthetists with a paediatric interest were always used for children's list. Anaesthetists took children straight into the operating theatre, without using an anaesthetic room.

The resuscitation trolleys were well organised and checks were undertaken regularly.

Immediate Risks: No immediate risks were identified.

Concerns

- 1 Some consultants on the emergency on-call rota did not have evidence of ongoing competence in paediatric airway management. (This applied to 6/21 consultants at Good Hope Hospital who did not respond to requests for information about their paediatric Continuing Professional Development (CPD) and 5/21 consultants who had no evidence of paediatric CPD in the last two years. At Birmingham Heartlands Hospital 2/21 consultants on the general and ITU rotas who were most likely to be involved with paediatric emergencies had no evidence of paediatric CPD in the last two years.)
- 2 Operating Department Assistants and recovery staff did not have evidence of training and competences in the care of children. Induction and recovery areas were not child-friendly.

Further Consideration

- 1 Good discussion about case selection took place but this was not clearly documented. The guidelines for day case surgery were not clear.

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APPENDIX 1 MEMBERSHIP OF VISITING TEAM

Executive Lead

Dr Charles Ralston	Consultant Anaesthetist	Birmingham Children's Hospital NHS Foundation Trust
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Visiting Team

Dr Vinodhini Clarke	Consultant Paediatrician	South Warwickshire NHS Foundation Trust
Natalie Edwards	Lead Nurse ED/PAU	Birmingham Children's Hospital NHS Foundation Trust
Dr Nigel Kiely	Consultant Orthopaedic Surgeon	The Robert Jones & Agnes Hunt Orthopaedic Hospital NHS Trust
Janice Llewellyn	Paediatric Haematology/Oncology Nurse Specialist	The Shrewsbury and Telford Hospital NHS Trust
Dr Reinout Mildner	Consultant Paediatric Intensivist	Birmingham Children's Hospital NHS Foundation Trust
Dr Afeda Mohamed Ali	PICU Consultant	Birmingham Children's Hospital NHS Foundation Trust
Mr Eddie Oforka	Consultant in Emergency Medicine	Burton Hospitals NHS Foundation Trust
Mandy Sankey	Clinical Service Manager for Theatres and Anaesthetics	Birmingham Children's Hospital NHS Foundation Trust
Kim Woolliscroft	Head of Paediatric Services /ANP	Mid Staffordshire NHS Foundation Trust

WMQRS Team

Jane Eminson	Acting Director	West Midlands Quality Review Service
Sarah Broomhead	Assistant Director	West Midlands Quality Review Service
Sue McIldowie	Quality Manager	West Midlands Quality Review Service

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APPENDIX 2 COMPLIANCE WITH 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 varied 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
Care of Critically Ill and Critically Injured Children			
Trust-Wide	11	8	73
Emergency Department	125	79	63
Birmingham Heartlands Hospital	(46)	(29)	(63)
Good Hope Hospital	(40)	(23)	(58)
Solihull Hospital	(39)	(27)	(69)
Paediatric Services	96	73	76
Birmingham Heartlands Hospital: In-patient, High Dependency and Paediatric Assessment Services, Day Surgery	(52)	(43)	(83)
Good Hope Hospital: Children's Assessment Unit	(44)	(30)	(68)
Paediatric Anaesthesia	34	17	50
Birmingham Heartlands Hospital & Solihull Hospital	(17)	(8)	(47)
Good Hope Hospital	(17)	(9)	(53)
Total	266	177	67

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