WM QRS West Midlands Quality Review Service

NHS

Review of Theatre and Anaesthetic Services

The Royal Wolverhampton NHS Trust

Visit Date: 1st and 2nd March 2016 Report Date: June 2016

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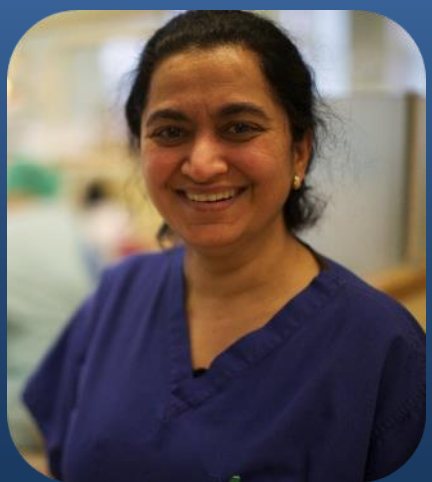

INDEX

INTRODUCTION

This report presents the findings of the review of theatre and anaesthetic services that took place on 1st and 2nd March 2016. The purpose of the visit was to review compliance with the following West Midlands Quality Review Service (WMQRS) Quality Standards:

- Theatre and Anaesthetic Services, Version 1.1, November 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 in The Royal Wolverhampton NHS Trust. Appendix 2 contains the details of compliance with each of the standards and the percentage of standards met.

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

- The Royal Wolverhampton NHS Trust
- NHS Wolverhampton 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 Wolverhampton 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 would like to thank the staff and service users and carers of The Royal Wolverhampton NHS Trust for their hard work in preparing for the review and for their kindness and helpfulness during the course of the visit. Thanks are also due to the visiting team and their employing organisations for the time and expertise they contributed to this review.

Return to *Index*

THEATRE AND ANAESTHETIC SERVICES

THE ROYAL WOLVERHAMPTON NHS TRUST

On 1st March 2016 this review visit looked at Trust-wide evidence and visited theatres and anaesthetic services at Cannock Chase Hospital. On 2nd March reviewers went to New Cross Hospital, Wolverhampton and visited four groups of theatres: main theatres (ten theatres), cardiac theatres (four theatres), eye theatres (two theatres) and the Beynon and obstetric theatres (five theatres). Cannock Chase Hospital had seven orthopaedic and general theatres, of which two were new facilities. At the time of the review patients were carefully selected as either ASA 1 or ASA 2 (American Society of Anesthesiologists categories) for elective surgery at Cannock Chase Hospital, although plans to admit ASA 3 dependent patients were being considered. Outside normal working hours Cannock Chase Hospital had a resident middle grade anaesthetist and an on-call consultant anaesthetist. New Cross Hospital had a full range of theatre and anaesthetic services.

Reviewers were aware that they spent proportionately longer in Cannock Chase Hospital theatres than in each of the theatre suites at New Cross Hospital. The findings of this report in relation to Cannock Chase Hospital are therefore likely to be more detailed than those relating to the individual theatre suites at New Cross Hospital.

General Comments and Achievements

Throughout the Trust, theatre and anaesthetic staff were friendly and welcoming. Theatres and anaesthetic services on both hospital sites had seen several changes of management in the two years preceding the review visit. In particular, Cannock Chase Hospital had been brought into The Royal Wolverhampton NHS Trust. Surgeons from University Hospitals of North Midlands NHS Trust also operated at Cannock Chase Hospital.

At Cannock Chase Hospital reviewers commented on the good patient feedback and the good relationship between ward and theatre staff. The criteria for selection for surgery appeared to be working well with no reported incidents or inappropriate referrals for surgery.

The eye theatres at New Cross Hospital were run as a cohesive unit, and were integrated with the eye care service including the eye casualty department. This resulted in efficient use of theatre time with good liaison to fill any gaps in theatre lists. Governance meetings were held regularly.

The Beynon and Obstetric theatres were also well-organised with a particularly positive and proactive attitude apparent to reviewers. Leadership of these theatres appeared strong with good support for junior staff – for example, band 5 staff shadowing band 6 staff.

Cardiac theatres were clearly well-led and efficiently organised. Reviewers commented particularly that lists appeared to run to time.

Main theatres at New Cross Hospital were organised differently for different specialties or groups of specialties, each of which was led by a band 7 nurse. This arrangement added a level of complexity to the organisation of the main theatres.

Reviewers saw examples of good practice in individual theatres and theatre suites on both hospital sites, including some very good examples of WHO *Safer Surgery* 'team briefs' and 'time out'.

Good Practice

1 Comprehensive information packages for patients undergoing joint surgery were available, covering all aspects of the patients' care. Patients and carers could also look at a 20 minute video about the procedure they were about to undergo.

2 The Trust website was well laid out, with a good range of pre- and post-operative information for surgical patients and their carers and for healthcare professionals.

3 At Cannock Chase Hospital the recovery areas for male and female patients were separate and the size of the two areas could be flexed as necessary. This provided good privacy and dignity for patients. Patients were held in recovery for the first post-surgery phase, and some patients having day case procedures were discharged home from the recovery area. Refreshments were available for patients.

4 At New Cross Hospital reviewers were impressed by the large number of multi-skilled theatre staff. This enabled flexible use of staff and supported the efficient running of the theatres.

5 The Appleby pre-admission facility at New Cross Hospital was well-organised and ensured that patients were very close to theatres early in the morning. A number of day case procedures were undertaken in the Appleby suite.

6 The eye care service ran a bi-monthly multi-disciplinary audit session that involved ward, imaging, eye casualty and theatre staff.

7 The 'time out' in cardiac theatres was an example of good practice: it was led by the consultant surgeon who spoke to everyone directly by their name, visitors were introduced, problems were anticipated and plans were agreed.

Immediate Risks

1 **Availability of Equipment**[1]

a. Two of the theatres at Cannock Chase Hospital did not have intubation trolleys. Some equipment was located on a fixed shelf in the anaesthetic room which meant that staff would have to go and collect equipment from this shelf if there was an airway emergency inside theatre.

b. The new theatre at Cannock Chase Hospital did not have a resuscitation trolley at the time of the visit, although one had been purchased.

c. There was no difficult airway trolley in the cardiac theatres at New Cross Hospital. This risk had been identified in June 2015 but had not been addressed by the time of the review visit.

2 **Sterile Supplies at Cannock Chase Hospital**[2]

Problems with sterile supplies at Cannock Chase Hospital meant that theatre sets were sometimes breached and could not be used. On the day of the review visit the spare theatre set of instruments was also breached and a further set of sterile instruments had to be obtained from New Cross Hospital. The patient had been anaesthetised before confirmation that the sterile instrument set was available. Reviewers were told that this was not the first time that this situation had arisen.

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[1] **Trust response:** (a) Two intubation trolleys were ordered on the day of the visit for both theatres. (b) The resuscitation trolley for the new theatre at Cannock hospital is now in use. (c) A trolley has been ordered with all the equipment and stock and will be located in the cardiothoracic theatres. To note that we do have a difficult airway trolley in close proximity in the intensive care unit which we share with the cardiac theatres.
WMQRS response*:* The proposed actions will mitigate the risks identified once all the actions have been implemented.

[2] **Trust response:** Before a patient is anaesthetised, the normal practice is for the Anaesthetist to check with the scrub team that it is safe to proceed to anaesthetise the patient. This happened on the first case but not the second. In order to prevent this happening again the patient will not be brought to the anaesthetic room until there is confirmation from the scrub team to proceed.
Damage to instrument wrapping is a known problem nationally. Recognising this risk we ensure that we have a backup set to avoid cancelling the patient on the day of surgery. In this instance the sterility of the second backup set was also compromised which is an extremely rare occurrence. To mitigate this risk we are in the process of putting all our instruments into tins where possible, with over 60% of our sets at Cannock already in tins.
WMQRS response*:* The proposed actions will mitigate the risks identified once all the actions have been implemented.

Concerns

1 **X-rays of Orthopaedic Patients in Recovery Area**

Reviewers were seriously concerned that orthopaedic surgeons were routinely taking X-rays of post-operative hip replacement and shoulder joints in the recovery area rather than undertaking screening X-rays if an issue was suspected in the theatres when the patient was still asleep. Reviewers considered that this practice exposed staff and other patients to an unnecessary radiation risk. Reviewers could see no clinical justification or benefit to the patient concerned, as X-ray images taken in recovery would not be adequate (quality and lack of lateral views), and problems such as joint dislocation would become apparent as soon as the patient was mobilised, which was usually within six hours. Also, patients were moved after being X-rayed and a joint could dislocate at this stage. Screens were used to try and limit radiation exposure but these were small and, in the cases observed by reviewers, were not properly positioned. At Cannock Chase Hospital, the practice resulted in the X-ray department being closed while the radiographer was in the recovery area, which inconvenienced other patients who could arrive and find a note on the department door asking them to wait. At New Cross Hospital, the practice impacted on the availability of radiographers for imaging in theatres and on the wards, both of which had limited capacity.

2 **Recording of Equipment Checks**

Records of the checking of resuscitation equipment, anaesthetic machines and difficult airway equipment were not complete. Arrangements for checking were not consistent across all areas; some staff said that checks were only undertaken after use, some said that checks were done weekly. The Trust policy identified where records should be kept and the colour of the files, but there was variation in storage and documentation and some records were not easily accessible.

3 **WHO *'Safer Surgery'* Checklist**

a. Two different versions of the WHO '*Safer Surgery*' Checklist were in use at the time of the review visit. Checklists at Cannock Chase Hospital had been photocopied several times, were barely legible and were not attached to any other documentation.

b. Inconsistent implementation of the checklist in theatres was also observed by reviewers. Some were excellent (see good practice) but in others, on both hospital sites, staff were observed who were not listening and, in one case, the checklist was not in the same room.

c. Evidence of audits of the implementation of the checklist was not available. Audits of the team brief and de-brief were seen at New Cross Hospital but these did not cover the implementation of the checklist. One observation audit had been undertaken but no observations were recorded and, in particular, the audit had no details of the behaviour witnessed. Reviewers did not see any evidence of audits at Cannock Chase Hospital.

4 **Theatre Etiquette**

Expectations about theatre etiquette were not clear and did not appear to be consistently implemented. For example, reviewers observed staff wearing normal clothes in theatre (Cannock Chase Hospital), staff with very long nails (both hospital sites) and staff wearing jewellery in theatre (cardiac theatres). At Cannock Chase Hospital reviewers observed a theatre instrument set being opened and then moved outside of the laminar flow system without being covered. Staff challenged the surgeon about this but were overruled. At New Cross Hospital some staff arrived in theatre after the team brief and did not introduce themselves.

At New Cross Hospital there was no clear boundary to the area where staff should be changed into theatre dress. Staff and visitors in normal clothes could walk through the whole theatre complex and be one door away from the theatres. Reviewers, who came from several hospitals across the West Midlands, commented on how unusual this was, and were uncomfortable about being so close to theatre in their outdoor clothes.

5 **List Organisation**

Several aspects of the organisation of lists were of concern to reviewers:

a. Theatre lists were not 'locked down' until 4pm the previous day. This gave little time for communication of information about the next day's list or for planning high dependency or intensive care. This was a particular problem for staff at Cannock Chase Hospital, who received information very late about the next day's list, affecting their ability to order specialist instrument sets/loan stock.

b. Several of the lists observed did not start ('knife to skin') until 9.30am and reviewers were told that this was not uncommon. The Trust policy was 'knife to skin' at 9am but the organisation of list preparation did not result in this happening in most theatres. (Cardiac theatres were an exception to this and started on time.)

c. The order of patients on the list was changed during the team brief and during the course of the list for no obvious clinical reason, on both hospital sites. Reviewers were aware that changes for clinical reasons may be needed but considered that these should be kept to a minimum as they can lead to mistakes.

d. Apart from a few lists at Cannock, on both sites patients arriving on the day of surgery were asked to attend at 7am. Patients could then be waiting up to 3pm to go into theatre. This may have helped theatre productivity but resulted in a much poorer patient experience, especially compared with 'batched' arrival of patients.

e. In practice, different theatres had different operational policies, for example in relation to over-runs and the cancellation of operations. In main theatres, there did not appear to be any oversight of the whole theatre complex; for example, for emergency cases, reviewers were told that some patients with fractured neck of femur and mandibular fractures were waiting a long time to go to theatre as a result. Reviewers were also told that patients requiring surgery for retinal detachment were waiting six hours for surgery to be performed as an emergency in the main theatres rather than the procedure being performed under local anaesthesia in the eye theatres.

6 **Manual Handling**

Staff had completed manual handling training but implementation of this training was not robust. In particular, staff were observed not using available moving and handling aids. Use of canvas sheets appeared routine in several of the theatres observed by reviewers, on both hospital sites. (The upper gastro-intestinal theatre was an exception to this and although staff did use the canvas sheet, they used manual handling aids appropriately.) In one theatre staff commented that they knew they should not be moving patients on canvas sheets but continued to do so. Slide sheets were available but were not being used. Reviewers were concerned about the impact of this practice on patients and staff.

Further Consideration

1 **IT Systems**

a. The theatre IT system in use at the time of the visit was slow and did not capture all of the expected data. In particular, the system was not able to support clinical audit. Data entry was therefore poor. At New Cross Hospital there were also insufficient computers for staff to access the theatre system easily. Staff at Cannock Chase Hospital were aware of the resulting problems as they had previously had a good theatre IT system.

b. The Trust electronic patient records were not easy to use and staff had to open multiple records in order to have an overview of the patient's care.

c. Some staff did not have access to email. Reviewers were told that staff could apply for email access but there was no monitoring of whether this was taken up.

2 **Staffing and Training**

a. Mandatory training, including manual handling and point of care testing training, was generally in place, although some of the basic life support training at New Cross Hospital was out of date. A competence framework and training plan were not yet in place. Records of training undertaken were being developed but were not yet easily accessible. Most of the service-specific training, including equipment training by the devices department, was undertaken outside the department. One Clinical Educator was new in post and not yet delivering any education, and the role was very large given the number of staff in the department and the spread over five different locations on two hospital sites. Senior staff were aware of this issue and were planning to address it. Reviewers considered that staff training would be a concern if not addressed in the near future.

b. Life support training was organised differently for registered healthcare professionals and for healthcare assistants. Training for healthcare assistants was available within the department but did not cover AED use. Registered staff had to access training outside the department and this was taking a long time to achieve. Reviewers suggested that in-department training could be offered to all staff, including AED use. Up to date life support training could then be achieved quickly and relatively easily.

c. 'Human factors' had been implemented in some theatres (for example, the Beynon theatres) but not in the main theatres at New Cross Hospital or at Cannock Chase Hospital.

d. The recovery area at Cannock Chase Hospital was staffed by ward staff. Staff appeared to have appropriate competences and this arrangement ensured good liaison with the wards. Consultant anaesthetists, especially those who had previously worked at New Cross Hospital, were not used to this arrangement and some were unsure that staff had appropriate competences, especially for recovery following more complex procedures. Reviewers suggested that further discussion of this arrangement with all concerned may be helpful.

e. The hospital resuscitation team at Cannock Chase Hospital included a nurse identified on a daily basis from ward or recovery staff. On the day of the visit one of the nurses on the hospital resuscitation team had only basic life support training, which did not appear appropriate for a member of the resuscitation team.

f. Reviewers were told by senior staff that recruitment to all vacancies at New Cross Hospital had been successful. Some staff said that there were still ten vacancies in main theatres and that agency staff were being used to cover these. This may be because staff who had been recruited had not yet taken up their posts.

3 **Risk Management and Learning**

a. Arrangements for feedback from incidents appeared inconsistent. Some staff said that they had feedback from serious incidents but not from other reported incidents. Some posters were available which gave feedback to staff, but safety (or equivalent) meetings at which these were discussed with staff took place in some theatres but not in all. Information on themes arising from incidents did not appear to be collated across the different theatres.

b. A risk register was available but few risks were identified. Reviewers were surprised that there were not more risks given the size and complexity of the theatre services provided.

c. A rolling programme of audits was in place, but included only national audits and did not cover Cannock Chase Hospital. Six audits were registered, but reviewers saw no evidence of action plans or the implementation of learning from audits.

4 **Facilities**

The theatre 7 anaesthetic room door at Cannock Chase Hospital could be activated by people walking past. Patients' privacy and dignity could be compromised if this happened when a patient was in the anaesthetic room.

5 **Documentation of Cleaning Checks**

Documentation of cleaning checks was inconsistent on both sites. At New Cross Hospital some theatres had cleaning schedules clearly displayed, but others had a board saying who was responsible for cleaning but no record of cleaning being done. Theatres at Cannock Chase Hospital were all cleaned in the morning but there was no record that this had taken place.

6 **Other**

A number of other issues were observed which it may be helpful for theatre teams to address in taking forward the development of theatre services:

a. Cannock Chase Hospital did not have an acute pain team but staff were able to access the team at New Cross Hospital. It may be helpful to audit how well this arrangement is working and, in particular, whether staff at Cannock Chase Hospital are clear of when to contact the acute pain team.

b. The policy on sharps boxes was different on the two hospital sites. New Cross Hospital had single use sharps boxes. Cannock Chase Hospital had re-usable boxes which were not all signed and dated. Reviewers suggested that a single policy for both sites may be helpful.

c. Several fridges, on both hospital sites, were not locked, sometimes when no-one was in the area. Reviewers also observed intravenous fluids stored in unlocked cupboards or in open areas (obstetric and main theatre recovery areas).

d. Reviewers did not see an up to date Control of Substances Hazardous to Health report. Staff did not appear aware of the forthcoming upgrade to the hazard category for formalin. Reviewers also observed unlabelled 'Tristel' at Cannock Chase Hospital.

e. Recovery areas at New Cross Hospital appeared cluttered, which would make them more difficult to keep clean. The head and neck theatre had storage racks in the actual theatre.

f. Responsibility for the 'C-arm' in the theatre at Cannock Chase Hospital was not clearly identified. Reviewers were told that imaging services department did not take responsibility for this equipment.

g. A significantly rusty patient trolley was observed in the anaesthetic room of the Upper GI Theatre.

7 **Leadership**

In summary, reviewers saw some examples of very good practice and other examples of variable or, in a few cases, poor practice. Reviewers' overwhelming impression was of inconsistency. This may not be surprising given the number and geographical separation of the different theatre suites, their different specialisations and the divisions in management arrangements within main theatres. Reviewers considered, however, that the extent of this inconsistency was unhelpful. Some teams had regular meetings, whereas others did not. Some theatre staff said that they received good, regular communication whereas others did not, and an overall service development plan was not yet in place. Further leadership development for the senior theatre team may be helpful in order to support them in addressing the range of issues identified in this report and further improving the quality and consistency of the Trust's theatre and anaesthetic services.

Return to *Index*

APPENDIX 1 MEMBERSHIP OF VISITING TEAM

Dr Nike Akinwale	Clinical Director Theatres, Anaesthetics & Critical Care	Walsall Healthcare NHS Trust
Dr Neil Ashwood	Consultant Orthopaedic Surgeon	Burton Hospitals NHS Foundation Trust
Lynn Atkin	Lead Nurse for Women and Children's Care Group	The Shrewsbury & Telford Hospital NHS Trust
Linda Comyns	Principal Operating Department Practitioner and Lead Clinical Facilitator	University Hospitals Coventry & Warwickshire NHS Trust
Amanda Cope	Senior Operating Department Practitioner and Quality Lead	University Hospitals of North Midlands NHS Trust
Julie Elmore	Critical Care Matron, Theatres	Walsall Healthcare NHS Trust
Rebecca Ferneyhough	Practice Development Nurse, Theatres and PACU	University Hospitals of North Midlands NHS Trust
Debra Jones	Matron, Theatres and Day Surgery	Heart of England NHS Foundation Trust
Dr Sally Millett	Clinical Director Anaesthesia	Worcestershire Acute Hospitals NHS Trust
Mr Nigel Williams	Consultant Colorectal Surgeon	University Hospitals Coventry & Warwickshire NHS Trust

WMQRS Team

Jane Eminson	Director	West Midlands Quality Review Service
Sarah Broomhead	Assistant Director	West Midlands Quality Review Service

Return to *Index*

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

Service	Number of Applicable QS	Number of QS Met	% met
Theatre and Anaesthetic Services			
Cannock Chase Hospital	45	27	60
New Cross Hospital	48	33	69
Total	93	60	65

Pathway and Service Letters

XG-	Theatre and Anaesthetic Services

Topic Sections

Each section covers the following topics:

-100	Information and Support for Patients and Carers
-200	Staffing
-300	Support Services
-400	Facilities and Equipment
-500	Guidelines and Protocols
-600	Service Organisation and Liaison with Other Services
-700	Governance

Return to *Index*

THEATRE AND ANAESTHETIC SERVICES

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-101	**Service Information** Patients should be offered written information about: a. Services provided, location and hours of opening b. Visiting hours and visiting arrangements c. How to contact the service d. Staff they are likely to meet	Y	Good information was available although some was out of date. This information was, however, under review. Some had been updated but had not yet completed the Trust approval process.	Y	Good information was available although some was out of date. This information was, however, under review. Some had been updated but had not yet completed the Trust approval process.
XG-102	**Procedure Information** For each procedure, patients should be offered written information, and the opportunity to discuss this, covering: a. Preparation for the procedure b. Types of anaesthesia available c. Staff who will be present at or who will perform the procedure d. Any side effects	Y	As Quality Standard XG-102	Y	As Quality Standard XG-102
XG-103	**Privacy, Dignity and Security** Patients' privacy, dignity and security should be maintained at all times, including security of clothes, dentures, hearing aids and personal belongings during examinations and procedures.	N	See main report in relation to the sliding door in the anaesthetic room of theatre 7. The Quality Standard was met elsewhere.	Y	The Quality Standard was met throughout. Obstetric theatres provided particularly good privacy and dignity for patients.
XG-104	**Communication Aids** Communication aids should be available to help patients with communication difficulties to participate in decisions about their care.	Y		Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-196	**General Support for Service Users and Carers** Patients and carers should have easy access to the following services. Information about these services should be easily available: a. Interpreter services, including access to British Sign Language b. 'Compliments and complaints' procedures	Y	It may be helpful to include information about complaints on the ward display boards.	Y	
XG-199	**Involving Patients and Carers** The service should have: a. Mechanisms for receiving feedback from patients and carers about their treatment and care b. Mechanisms for involving patients and carers in decisions about the organisation of the services c. Examples of changes made as a result of feedback and involvement of patients and carers	N	'Friends and Family' test results were available for the wards but there was no theatre-specific feedback or evidence of actions taken as a result of feedback from patients. Mechanisms for involving patients and carers in decisions about the organisation of theatres were also not evident.	N	'Friends and Family' test results were available for the wards but there was no theatre-specific feedback or evidence of actions taken as a result of feedback from patients. Mechanisms for involving patients and carers in decisions about the organisation of theatres were also not evident.
XG-201	**Leadership** Theatre and Anaesthetic Services should have a Clinical Director, Lead Nurse, Lead Operating Department Practitioner and Lead Manager with responsibility for staffing, training, guidelines and protocols, service organisation, governance and for liaison with other services.	Y	See main report (further consideration section).	Y	See main report (further consideration section).

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-202	**Service Leads** Leads for, at least, the following areas should be identified: a. Critical care, including high dependency care and outreach b. Acute and non-acute pain services c. Obstetric anaesthesia d. Care of children e. Major incidents f. Admissions and day care g. Pre-operative assessment h. Recovery i. Equipment management	Y	Service leads covered both hospital sites.	Y	Service leads covered both hospital sites.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-203	**Staffing Levels** The service should have sufficient staff with appropriate competences to deliver the expected number of assessments and procedures for the usual case mix of patients within expected timescales (QS XG-602). An escalation policy should be in place which ensures flexibility of staffing in response to fluctuations in demand and availability of staff. Staffing levels should be based on a competence framework covering staffing levels and competences expected (QS XG-206), and should ensure an appropriate skill mix of consultant anaesthetists, other anaesthetic medical staff, physicians assistants, operating department practitioners, theatre assistants, theatre nurses and porters. In Major Trauma Centres the trauma anaesthetic team should be separate from other emergency and elective teams. In hospitals with obstetric units the obstetric anaesthetic team should be separate to enable elective work to continue uninterrupted by emergency work and a named consultant should be responsible for each elective caesarean section list.	Y	See main report (further consideration section).	Y	See main report (further consideration section).

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-204	**Obstetric Anaesthesia Duty Anaesthetist** A duty anaesthetist competent to undertake duties on the delivery suite should be: a. Immediately available for emergency work on the delivery suite 24/7 b. Resident on-site in units offering a 24 hour epidural service c. Able to delay other responsibilities should obstetric work arise All duty anaesthetists should have completed an initial assessment of competence in obstetric anaesthesia (IACOA) or have equivalent competences before undertaking unsupervised obstetric work.	N/A	There was no obstetric theatre service at Cannock Chase Hospital.	Y	Arrangements for obstetric anaesthesia were excellent, with all aspects of the Quality Standard met in full.
XG-205	**Acute Pain Team** An acute pain team should be available including: a. Consultant anaesthetist with sessional commitments to the team b. Specialist nurse with specific competences in the management of acute pain c. Other medical, nursing and operating department practitioner staff as required for the number of patients and the complexity of their needs d. Pharmacist with sessional commitments to the team e. Physiotherapist with sessional commitments to the team	Y	Cannock Chase Hospital had access to the Trust acute pain team.	Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-206	**Competence Framework and Training Plan** A competence framework should cover expected competences for roles within the service. A training and development programme should ensure that all staff have, and are maintaining, these competences. The competence framework and training plan should cover all staff identified in QS XG-203, including at least: a. Moving and handling in the theatre environment b. Drug administration c. Plastering d. Resuscitation e. Use of equipment f. Care of children and young people	N	See main report (further consideration section)	N	See main report (further consideration section)
XG-207	**New Starters, Agency, Bank and Locum Staff** Before starting work in the service, local induction and a review of competence for the expected role in assessments and procedures should be completed for all new starters, agency, bank and locum staff.	Y	All new staff were required to complete a full mandatory training induction followed by a local induction. Agency staff were not used. The induction was out of date (July 2014).	Y	
XG-208	**Emergency Service** Staff with appropriate competences should be available outside planned sessions including: a. On call consultant anaesthetist b. On-site anaesthetist of grade CT3 or above (or equivalent) c. Emergency theatre service Competences for emergency work should be maintained through appropriate Continuing Professional Development and / or daytime job-planned work.	Y	'a' and 'b' were met. There was no emergency theatre at Cannock Chase Hospital. Any patients who needed emergency surgery were transferred to New Cross Hospital. A flow chart was displayed in the recovery area for the process to follow if a transfer was indicated.	Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-209	**Staff monitoring** Arrangements should be in place for monitoring and reviewing staff sickness, vacancy and turnover levels.	Y		Y	
XG-210	**Team building** The service should encourage a range of activities to develop team building and multi-professional working.	N	Reviewers did not find evidence of team building activities. A Journal Club was in place but the extent of multi-professional contribution to this was not clear. Team building activities between the two sites were not yet in place.	N	Team building activities were evident in the Beynon, obstetric, eye and cardiac theatres but not in main theatres. Team building activities between the two sites was not yet in place.
XG-299	**Administrative, Clerical and Data Collection Support** Administrative, clerical and data collection support should be available during working hours to support all aspects of theatre and anaesthetic services, including the acute pain team.	Y		Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-301	**Support Services** Timely access to the following services should be available: a. IT support b. Hospital porters c. Patient transport d. Security e. Cleaning f. Linen supplies g. Logistics and sterile services h. Pharmacy, covering advice and supply of drugs and medical gas testing i. Infection control advice j. Medical records k. Pathology l. Imaging m. Plastering (if not part of theatre and anaesthetic service) n. Electronic and Bio-Medical Engineering	N	See main report in relation to supply of sterile services.	Y	
XG-302	**Blood and Transplant** Appropriate arrangements should be in place for: a. Supply and storage of blood products b. Other NHS Blood and Transplant storage requirements (if applicable)	Y		Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-401	**Facilities and Equipment** The service should have appropriate facilities and equipment to deliver the expected number of assessments and procedures for the usual case mix of patients within expected timescales (QS XG-602). Facilities and equipment should comply with all relevant Standards and should ensure: a. Appropriate privacy, dignity and security for patients (QS XG-103) b. Appropriate separation of children and adults c. Immediate availability of resuscitation equipment for children and adults which is checked in accordance with Trust policy d. Availability of specialist equipment when required e. In-theatre imaging when required	N	See main report.	N	See main report.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-402	**Equipment Management** The service should have arrangements for equipment management covering: a. Procurement and management of equipment and consumables b. Installation assurance c. Calibration, operation and performance of equipment d. Equipment maintenance (service contracts and maintenance schedules) covering planned maintenance and 24/7 breakdown or unscheduled maintenance e. Contingency plans in the event of equipment breakdown f. Monitoring and management of equipment failures and faults g. Ensuring safety warnings, alerts and recalls are circulated and acted upon within specified timescales h. Programme of equipment replacement and risk management of equipment used beyond its replacement date	Y		Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-403	**Delivery Suite Equipment** The following facilities and equipment should be available within the Delivery Suite: a. At least one fully equipped obstetric theatre b. Blood gas analysis and the facility for rapid estimation of haemoglobin and blood sugar c. Monitoring equipment for the measurement of non-invasive blood pressure and invasive haemodynamic monitoring d. Equipment for measuring ECG, oxygen saturation and temperature e. Rooms should have oxygen, suction equipment and resuscitation equipment, including a defibrillator. All equipment must be checked in accordance with Trust policy. f. Rooms should have active scavenging of waste anaesthetic gas to comply with COSHH guidelines on anaesthetic gas pollution. g. Supply of O rhesus negative blood available 24/7 for emergency use h. Blood warmer allowing the rapid transfusion of blood and fluids. i. Access to cell salvage equipment. j. Patient controlled analgesia equipment and infusion devices for post-operative pain relief k. Ultrasound imaging equipment for central vascular access, transversus abdominis plane (TAP) blocks and epidural cannulation of patients as well as high risk and bariatric women l. Intralipid, Sugammadex and dantrolene with their location clearly identified.	N/A	There was no obstetric service at Cannock Chase Hospital.	Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-404	**IT system** IT systems for storage, retrieval and transmission of patient information should be in use. Theatre and anaesthetic staff should have access to: a. Pre-assessment information b. Theatre management system c. Trust Patient Administration System d. Emails and the Trust intranet and policies e. On-line medical and other relevant information System connectivity should be sufficient to ensure that patient details are entered once only.	Y	See main report (further consideration section).	Y	See main report (further consideration section).
XG-405	**Moving and Handling Aids** Moving and handling aids should be available and appropriately maintained.	Y	See main report.	Y	See main report.
XG-406	**Specialist Equipment** The service should have access to appropriate equipment, moving and handling aids and patient gowns to meet the needs of: a. Bariatric patients b. Adults and children with physical disabilities	N/A	Patients needing specialist equipment were not operated on at Cannock Chase Hospital.	Y	
XG-501	**Referral Information** Guidelines on information to be sent with each referral should have been agreed and circulated to all referring GPs and referring hospital clinicians.	Y		Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-502	**Patient Pathway Guidelines** Guidelines should be in use covering: a. Pre-assessment, including antenatal referrals b. Pre-operative care c. Assessment prior to anaesthesia and procedure d. Range of anaesthetic techniques normally offered for each procedure e. Use of WHO *Safer Surgery* Checklist f. Anaesthetic assistance throughout the procedure. g. Monitoring during anaesthesia and recovery h. Post-operative care i. Post-surgery review j. Recognition and treatment of complications, including involving other services as required k. Anaesthesia in the CT and MRI environment l. Use of ultrasound during anaesthesia m. Anaesthesia in the plaster room n. Wrong site block tool kit o. Handover to post-anaesthetic care These protocols should be explicit about responsibilities at each stage of the assessment and procedure and about handover between stages of the patient pathway. Protocols should be specific about indications and arrangements for day case and short-stay surgery and enhanced recovery.	N	See main report in relation to WHO *Safer Surgery* Checklist. 'I' was not clear. Other aspects of the Quality Standard were met.	N	See main report in relation to WHO *Safer Surgery* Checklist. 'I' was not clear. Other aspects of the Quality Standard were met.
XG-503	**Consent** The Trust consent procedure should be in use.	Y		Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-504	**Clinical Guidelines** Clinical guidelines should be in use covering at least: a. Management of patients with allergies b. Post-operative management of epidural anaesthesia and peripheral nerve catheters c. Blood transfusion including blood component therapy, intra-operative cell salvage and management of massive haemorrhage d. Management of suspected anaphylaxis during anaesthesia e. Peri-operative management of bariatric patients f. Management of patients with diabetes g. Management of malignant hypothermia h. Management of post-operative nausea and vomiting i. Management of patients with trauma j. Management of sepsis k. Management of acute unplanned surgical care l. Conditions requiring antenatal referral to an anaesthetist (available to both obstetricians and midwives) m. High risk surgical care for patients with a predicted hospital mortality of $\geq$10%	N	Guidelines were available but were not stored in a 'green folder' on the back of the anaesthetic machines in line with the Trust policy.	N	Guidelines were available but were not stored in a 'green folder' on the back of the anaesthetic machines in line with the Trust policy.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-505	**Transfer** Guidelines on transfer of patients should be in use covering, at least: a. Transfer to and from critical care services within the hospital b. Transfer for critical care or other specialist care outside the hospital Guidelines should be specific about communication, staffing, equipment and transport during the transfer and governance responsibility.	Y		Y	
XG-506	**Pain Management** Guidelines should be in use covering management of: a. Peri- and post-operative acute pain b. Chronic pain	Y		Y	
XG-507	**Infection Control** Guidelines on infection control should be in use, including: a. Care of patients with suspected or confirmed contagious and communicable diseases and/or suppressed immune systems, including patient care before, during and after their procedure b. Decontamination of equipment and environment, including before and after use by patients with suspected or confirmed contagious or communicable diseases c. Use of single-use, disposable equipment	Y	See main report (further consideration section).	Y	See main report (further consideration section).

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-508	**Resuscitation Policy** The Trust resuscitation policy should be in use.	Y	The policy was in use and was mandatory training for all staff. A second resuscitation trolley had been purchased recently and commissioned in line with the expansion of the service.	Y	
XG-509	**Network and More Specialist Services** Guidelines should be in use covering arrangements and agreed timescales for: a. Access to procedures available at other hospitals b. Access to specialist advice or procedures not available within the hospital c. Arrangements for theatre and anaesthetic staff and equipment to transfer to carry out procedures at another hospital (if required), including governance responsibility.	Y	Guidelines were appropriate for the service provided.	Y	

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-510	**Management of Drugs and Anaesthetic Agents** Guidelines on the management of drugs and anaesthetic agents should be in use covering at least: a. Roles and responsibilities b. Security and storage c. Prescription, including prescription of unlicensed medicines and controlled drugs d. Preparation and administration e. Identification and management of extravasation f. Identification and management of patients at risk of adverse reactions g. Management of continual infusion and patient-controlled analgesia h. Prescribing of drugs to take home for day case patients i. Control of waste anaesthetic gases	Y	See main report (further consideration section).	N	See main report (further consideration section).
XG-511	**Hazardous Substances** The service should have an up to date report showing compliance with Control of Substances Hazardous to Health (COSHH) Regulations.	N	Reviewers were not provided with an up to date report showing compliance with COSHH Regulations. Unlabelled 'Tristel' was observed.	N	Reviewers were not provided with an up to date report showing compliance with COSHH Regulations.
XG-512	**Health and Safety** The Trust Health and Safety Policy should be in use, including specific reference to the response to clinical incidents.	Y	Information on response to incidents was not available. Staff said that they had not had any incidents.	Y	Cardiac and Beynon theatres had boards with good information about responses to incidents.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-601	**Operational Policy** A Theatre and Anaesthetics Service Operational Policy should be in use covering at least: a. Availability of services, including 24/7 availability b. Visitors and visiting by relatives and others c. Staff clothing d. Professional behaviour in the theatre environment e. Management of staff who are new or expectant mothers f. Safe handling and positioning of patients g. Communication and liaison with Trust bed management, surgical teams, obstetrics, imaging and pathology services h. IT security i. Management of clinical waste j. Safeguarding children and vulnerable adults in the operating theatre k. Death of patients in the theatre environment and organ donation l. Arrangements for obtaining feedback from hospital clinicians and for involving referring GPs and hospital clinicians in decisions about the organisation of the service m. Response to a Major Incident	N	A draft policy was available, although the timescale for ratification was not clear.	N	A draft policy was in place. Most aspects were already implemented in practice. See main report in relation to theatre etiquette.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-602	**Capacity Management** The service should have a capacity management plan covering: a. Expected timescales for response to emergency, urgent and planned demand b. Response to unexpected fluctuations in demand c. Response to delays in surgery and recovery d. Medical arbitration on priority of theatre cases (Major Trauma Centres only) e. Daily access to theatres for reconstructive microsurgery (Major Trauma Centres only)	N	A capacity or escalation plan was not yet in place.	N	Bed meetings took place. Capacity appeared to be managed in specialty 'silos' (see main report). A clear capacity management plan was not yet in place.
XG-603	**Risk Assessment and Management** A system risk assessment and risk management should be in use covering risk assessment, risk management and review of risks. Risks and actions should be recorded in an up to date Divisional Risk Register. The risk management system should include feedback to staff about risks identified and action taken.	N	See main report (further consideration section).	N	See main report (further consideration section).
XG-604	**Service Improvement** The service should have systems for ongoing review and improvement of quality, safety and efficiency, including at least: a. Theatre utilisation b. Staff utilisation c. Review of clinical pathways with referring GPs and hospital clinicians	N	Reviewers did not see evidence of service improvement work.	Y	Some theatre utilisation data were available.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-605	**Service Development Plan** The service should have a development plan or strategy which brings together the staffing, training, equipment and facilities plans for the next five years in support of the Trust's business plans.	N	A very general plan was available but this did not comprise a service development plan for theatres.	N	A very general plan was available but this did not comprise a service development plan for theatres.
XG-701	**Data Collection** Regular data collection and monitoring should cover: a. Theatre utilisation, theatre session over-runs and under-runs b. Activity levels c. Timed clinical events along the patient pathway d. Achievement of agreed timescales for responding to emergency, urgent and planned demand e. Operations on 'high risk' surgical patients carried out under the direct supervision of a consultant surgeon and consultant anaesthetist f. Operations on patients with a predicted mortality of >5% where the consultant surgeon and consultant anaesthetist are present for the operation	Y	See main report (further consideration section) in relation to difficulties with data collection.	Y	See main report (further consideration section) in relation to difficulties with data collection.
XG-702	**Audit** The service should have a rolling programme of audit of compliance with guidelines and protocols [QSs XG-500s] and related outcomes.	N	A rolling programme of audit was available but this did not appear to include the service at Cannock Chase Hospital.	Y	The rolling programme included only the national mandatory audits. Six audits were registered on the plan but evidence of action plans and outcomes was not available.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-703	**Quality Assurance System** The service should have a system to ensure analysis and feedback on the quality of: a. Equipment management (QS XG-402) b. Cleanliness of theatres c. Preparation of clinical areas d. Implementation of *WHO Checklist* Feedback to individual members of staff should be linked with appraisal and re-validation arrangements.	N	See main report in relation to 'b' and 'd'.	N	'a': some log books were seen but others were not available. See main report in relation to 'b' and 'd'.
XG-704	**Monitoring of Key Performance Indicators** Key performance indicators (QS XG-701) should be reviewed regularly with Trust management and with commissioners.	Y		Y	
XG-798	**Multi-Disciplinary Review and Learning** The service should have appropriate multi-disciplinary arrangements for review of, and implementing learning from: a. Positive feedback, complaints, outcomes, incidents and 'near misses' b. Published scientific research and guidance relating to theatre and anaesthetic services	N	Minutes were seen for meetings in June 2015 and January 2016. These did not appear to be multi-disciplinary and reviewers did not see evidence of multi-disciplinary review and learning.	N	The Quality Standard was met except in main theatres. The eye theatres and the Appleby Suite had particularly good arrangements for multi-disciplinary review and learning. In main theatres nurses and anaesthetists had separate meetings. One airway session was held each year which did involve everyone but, for main theatres, this did not comprise evidence of multi-disciplinary review and learning.

Ref	Quality Standard	Met? Y/N	Reviewer Comments Cannock Chase Hospital	Met? Y/N	Reviewer Comments New Cross Hospital
XG-799	**Document Control** All policies, procedures and guidelines should comply with Trust document control procedures.	N	Some policies were out of date.	N	Some policies were out of date. Different versions of the WHO Checklist had been agreed for use across the different specialties but there were also older versions of the checklist in circulation.

Return to *Index*