

University Hospitals Birmingham NHS Foundation
Trust

Queen Elizabeth Medical Centre

Quality Report

Mindelsohn Way
Edgbaston
Birmingham
B15 2TH
Tel: 0121 6272000
Website: www.uhb.nhs.net

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This report describes our judgement of the quality of care at this hospital. It is based on a combination of what we found when we inspected, information from our 'Intelligent Monitoring' system, and information given to us from patients, the public and other organisations.

Ratings

Overall rating for this hospital

Good



Surgery

Good



Summary of findings

Letter from the Chief Inspector of Hospitals

The cardiac surgery service at the Queen Elizabeth Medical Centre provides cardiac surgery to adult patients either as an elective (planned) case or as an emergency. The service performs a number of specialist cardiac surgery procedures as well as conventional surgery. Patients are referred locally and nationally to the service. A cardiac transplant service is also provided.

The Care Quality Commission (CQC) received notification of potential concerns regarding patient outcomes following cardiac surgery at University Hospitals Birmingham NHS Foundation Trust. There were two separate sources of statistical analysis:

- We were notified in 26 August 2015 of an outlier alert for in-hospital mortality associated with coronary artery bypass graft ('CABG (other)') procedures, generated by the Dr Foster Unit at Imperial College London.
- We were notified on 11 September 2015, of an outlier alert for in-hospital survival rates following adult cardiac surgery, generated by the National Institute for Cardiovascular Outcomes Research (NICOR) in association with the Society for Cardiothoracic Surgery in Great Britain and Ireland (SCTS) (April 2011 to March 2014). The data was formally notified to the trust in August 2015 and published in September 2015. The trust was first alerted to concerns March 2015.

We requested information from the trust on the actions taken in response to the outlier alert on 4 September 2015 and requested information on trust's audit outcomes for adult cardiac surgery. The trust responded to us on 14 September 2015 and identified 'significant methodological issues' with the outlier data and told us they had implemented a quality improvement programme. The trust challenged the statistical methodology that had been applied with Imperial College and NICOR. We received confirmation from Imperial College and NICOR on 15 October 2015 that the statistical analysis of the outlier data was accurate. The outlier data is risk adjusted and is therefore not contributed to by the complexity of surgery. We received further information of concern from Health Care Quality Improvement Partnership (HQIP) following a meeting with them in November 2015.

We carried out a short notice focused responsive inspection of cardiac surgery services on 22 and 21 December 2015. The inspection was announced to the trust on 14 December 2015. We inspected this service because of the serious concerns relating to cardiac surgery mortality, and a lack of specific information provided by the Trust in order to understand the significance of the concern or the immediate actions being taken.

We followed the pathway for patients and inspected the pre-operative assessment, operative care (in theatres), post-operative critical care and care on the cardiac ward. We did not inspect heart transplant surgery. We inspected cardiac surgery services, which is part of a surgical services core service. We have therefore not provided ratings for the service.

Our key findings were as follows:

- The cardiac surgery service had been identified as a significant mortality outlier when compared to similar services. The cardiac surgery service monitored patient outcomes, but the results of this monitoring were not used effectively to improve quality.
- The trust had only recently started a quality improvement programme (QIP), despite concerns being identified in 2013 during an internal review and consultants approaching the executive team in 2014 with concerns around patient mortality and morbidity. The trust was also informed about the NICOR mortality outlier in March 2015. The trust had failed to take effective action in response to these concerns. There had also been many concerns raised by staff with service, divisional and trust leads that had also not triggered effective action. Some staff we spoke with were not aware that the service had been identified as a significant outlier through a national audit and national outlier programme, nor that a QIP had been started by the trust.

Summary of findings

- The cardiac surgery service had no vision or strategy and lacked clear clinical and operational leadership at service and divisional level. This resulted in a service that was fragmented and dysfunctional, with departments working in isolation rather than as a team. There were delays in decisions being made both clinically and organisationally which impacted on patient care. The service had not anticipated, and was not monitoring, the impact of taking an increasing number of complex patients for heart failure and transplant surgery which had decreased the volume of routine heart operations.
- There were significant concerns around the lack of governance processes to monitor quality, safety and risk. Patient outcome data was collected but was not shared or used effectively by the service to improve quality. There was insufficient attendance, and challenge about patient outcomes, at mortality and morbidity meetings and multidisciplinary team meetings. The service did not consistently take account of relevant national guidance and evidence based practice to ensure a standardised approach to patient care and treatment.
- The Five Steps to Safer Surgery were not always completed to minimise the risk of avoidable harm to patients. Surgical trainees were not always supervised by a consultant in theatres when it was appropriate to do so. There had been instances where it had been difficult to quickly locate a surgeon when a complication had arisen in theatre. Some operations took longer than expected and patients were on cardiopulmonary bypass for long periods and higher than expected use of blood products. Re-bleeding rates post-surgery were higher than expected, and proportion of patients having to return to theatre for re-exploration and further surgery was much higher than that nationally.
- Consultant cardiac surgeons did not consistently undertake ward rounds on the cardiac surgery ward, they were not always in theatre at appropriate times and they were failing to effectively communicate with nursing staff and intensivists in critical care.
- There was a high rate of cancellations for elective patients (planned surgery), with some patients' surgery being cancelled on multiple occasions. Staff repeatedly raised concerns about cancellations and the impact on patients as well as the morale of staff. The majority of cancellations were due to a lack of critical care beds and staffing. However, institutional behaviours of surgeons including late starts to operations, extended length of operation times and waiting for confirmation of a bed in ITU often resulted in the cancellation of the second case. Actions to decrease the number of cancellations were not having sufficient impact. Weekly meetings took place to review cancellations but there had not been significant change or action by the trust despite the data being collected. Clinical staff had identified for areas for improvement, for example, a step down cardiac ward, but there were not clear plans to implement these changes.
- There was no monitoring of risk for patients whose surgery had been cancelled or those who were on the waiting list for longer than they should be. Waiting lists were not shared across surgeons via 'pooling', which resulted in some patients waiting longer than the 18 week target. Cardiologists at the trust were increasingly referring patients to other local hospitals for surgery where there were the shorter wait times, fewer cancellations, and good patient outcomes. This was leading to the service operating at a low volume with associated risks
- Staff described a bullying and blame culture in theatres and critical care. Staff found it difficult to raise concerns or challenge poor performance and behaviours. Staff did not always report incidents; where these were discussed the blame culture prevented an open discussion to encourage learning and improvements to patient safety.
- There were issues regarding low staffing numbers and the insufficiency of training for staff to undertake their role. There were vacancies in theatres that resulted in operations being cancelled or staff working additional shifts. Nursing staff in critical care were concerned that they had not received specific training to look after cardiac patients or in the specialist equipment they required. Medical staff in critical care were not all cardiac trained and at night there were difficulties accessing the on-call surgeon or the consultant anaesthetist. There had been a number of near misses and unexpected patient deaths in critical care.

Summary of findings

- Consultant staff in particular felt demoralised about their service. Staff had become disengaged and morale was low. Staff were not confident that the QIP would address all the concerns they had about the service and ensure the safe care and treatment of cardiac surgery patients.
- Patient feedback was very positive. Staff treated patients with dignity and respect. Patients described the excellent quality care they received from staff.
- Patients told us they had been involved in making decisions about their care. Staff took the time to speak with them and treated them holistically, rather than just focusing on their medical needs.
- Staff working in the cardiac surgery service were positive about this inspection. They wanted to improve the quality of their service and saw the inspection as an opportunity to ensure this happened.

There were areas of poor practice where the trust needs to make improvements.

We told the trust to immediately:

- Commission, and undertake, an external review of cardiac surgery to identify the key actions that are necessary in response to the concerns identified.
- Provide information to CQC on patient outcomes to provide assurance around safety and quality pending the outcome of the external review and to take steps to ensure patient safety.

The trust must ensure:

- Patient outcomes, based on SCTS data set, are regularly reviewed and monitored and action is taken in response to any patient safety concerns both at individual and service level.
- There is a positive reporting culture for reporting incidents across the whole service with learning as the key objective
- The impact of cancellations and patients waiting is monitored and actions taken to minimise the risk to patients arising from long waits and multiple cancelled operations.
- The Five Steps to Safer Surgery checklist is implemented appropriately and regular observational audit takes place to ensure this is happening.
- Staffing levels in theatres and critical care are reviewed to meet national guidance and ensure rotas clearly identify staff roles.
- Consultant surgeons are always available to provide supervision and immediate support whenever trainee cardiac surgeons operate to meet national guidance.
- Sufficient surgical and medical staff are available and have the appropriate skills, knowledge and expertise to care for patients on the ward and in critical care
- Medical staffing rotas (including on-call) mean staff are appropriately available and also not on-call for two departments at the same time.
- All staff complete safeguarding children and vulnerable adults training in line with trust targets.
- The storage room in theatres are appropriately maintained so all equipment and supplies can be accessed. Review the appropriateness of all items stored in this room to ensure staff and patient safety.
- Medicines are stored and managed safely.
- Standardised care pathways are further developed in surgery and developed in critical care and these take account of national guidance.

Summary of findings

- There are best practice based standard operating procedures and protocols for all areas within cardiac surgery services and these are reviewed routinely and kept in date.
- All discussions with patients about their care are documented in the patients' medical record.
- There is regular attendance at MDT meetings by relevant staff.
- Patients are nil by mouth for the minimum time necessary pre operatively.
- Nursing staff on critical care have the appropriate competence and skills to provide the required care and treatment to cardiac surgery patients, including the safe use of equipment.
- There are effective operational improvement plans to improve patient flow.
- Cardiac surgery theatre use and productivity improves to meet the demands of the service and to minimise the risk to patients from long referral to treatment times (RTT).
- Cancellations of elective cardiac surgery for non-clinical reasons are significantly reduced.
- Patient on waiting list are prioritised appropriately and they receive treatment within national waiting times.
- There is effective multidisciplinary working in the cardiac surgery service.
- A clear strategy and vision agreed by all across cardiac surgery services.
- The pace of change within cardiac surgery services is significantly and demonstrably increased to ensure patient safety.
- Appropriate clinical and operational leadership arrangements are in place to support improvement across the cardiac surgery service.
- Robust governance processes to monitor quality and to identify, assess and manage risk. This includes an effective clinical audit programme and national benchmarking. Key areas of concern are reportedly on regularly and action taken promptly.
- Action is taken to address issues of bullying of staff, promote staff welfare and manage poor performance appropriately.
- Action is taken to identify and take action on the reasons why staff are leaving the service and to develop retention plans.
- Staff concerns across the service are listened to and responded to in a timely manner.
- Patient consent is obtained appropriately at all times, including when their personal confidential information is displayed in public areas.

Action the hospital SHOULD take to improve

The trust should:

- Develop more effective ways to actively involve patients and their families or carers in the development of the service.

We informed the trust of our serious concerns immediately after the inspection and told them to take immediate action. We instructed the trust to undertake an external review and to supply us with weekly reports on patient outcome and activity data. We are monitoring the service and patient care with our specialist advisors.

Summary of findings

Professor Sir Mike Richards
Chief Inspector of Hospitals

Summary of findings

Our judgements about each of the main services

Service Surgery

Rating Why have we given this rating?

Good



- The cardiac surgery service had been identified as a significant mortality outlier when compared to similar services. The cardiac surgery service monitored patient outcomes, but the results of this monitoring were not used effectively to improve quality.
- The trust had only recently started a quality improvement programme (QIP), despite concerns being identified in 2013 during an internal review and consultants approaching the executive team in 2014 with concerns around patient mortality and morbidity. The trust was also informed about the NICOR mortality outlier in March 2015. The trust had failed to take effective action in response to these concerns. There had also been many concerns raised by staff with service, divisional and trust leads that had also not triggered effective action. Some staff we spoke with were not aware that the service had been identified as a significant outlier through a national audit and national outlier programme, nor that a QIP had been started by the trust.
- The cardiac surgery service had no vision or strategy and lacked clear clinical and operational leadership at service and divisional level. This resulted in a service that was fragmented and dysfunctional, with departments working in isolation rather than as a team. There were delays in decisions being made both clinically and organisationally which had impacted on patient care. The service had not anticipated, and was not monitoring, the impact of taking an increasing number complex patients for transplant surgery which had decreased the volume of routine operations.
- There were significant concerns around the lack of governance processes to monitor quality, safety and risk. Patient outcome data was collected but was not shared or used effectively by the service to improve quality. There was insufficient attendance, and challenge about patient outcomes, at mortality

Summary of findings

and morbidity meetings and multidisciplinary team meetings. The service did not consistently take account of relevant national guidance and evidence based practice to ensure a standardised approach to patient care and treatment.

- The Five Steps to Safer Surgery were not always completed to minimise the risk of avoidable harm to patients. Surgical trainees were not always supervised by a consultant in theatres when it was appropriate to do so. There had been instances where it had been difficult to quickly locate a surgeon when a complication had arisen in theatre. Some operations took longer than expected and patients were on bypass for long periods and higher than expected use of blood products. Re-bleeding rates post-surgery were higher than expected, and proportion of patients having to return to theatre for exploration and further surgery was much higher than nationally.
- Consultant cardiac surgeons did not consistently undertake ward rounds on the cardiac surgery ward, they were not always in theatre at appropriate times and they were failing to effectively communicate with nursing staff and intensivists in critical care.
- There was a high rate of cancellations for elective patients (planned surgery), with some patients' surgery being cancelled on multiple occasions. Staff repeatedly raised concerns about cancellations and the impact on patients as well as the morale of staff. The majority of cancellations were due to a lack of critical care beds and staffing. However, there were also institutional behaviours of surgeons including late starts to operations, extended length of operation times and waiting for confirmation of a bed in ITU, often resulted in the cancellation of the second case. Actions to decrease the number of cancellations were not having sufficient impact. Weekly meetings took place to review cancellations but there had not been significant change or action by the trust despite the data being collected. Clinical staff had identified for areas for improvement, for example, a step down cardiac ward, but there were not clear plans to implement these changes.

Summary of findings

- There was no monitoring of risk for patients whose surgery had been cancelled or those who were on the waiting list for longer than they should be. Waiting lists were not shared across surgeons via 'pooling', which resulted in some patients waiting longer than the 18 week target. Cardiologists at the trust were increasingly referring patients to other local hospitals for surgery due to the shorter wait times, fewer cancellations, and good patient outcomes. This was leading to a low volume service with associated risks
- Staff described a bullying and blame culture in theatres and critical care. Staff found it difficult to raise concerns or challenge poor performance and behaviours. Staff did not always report incidents; where these were discussed the blame culture prevented an open discussion to encourage learning and improvements to patient safety.
- There were issues regarding low staffing numbers and the insufficiency of training for staff to undertake their role. There were vacancies in theatres that resulted in operations being cancelled or staff working additional shifts. Nursing staff in critical care were concerned that they had not up to date knowledge and skills to look after cardiac patients or training in the specialist equipment they required. Medical staff in critical care were not all cardiac trained and at night there were difficulties accessing the on-call surgeon or the consultant anaesthetist. There had been a number of near misses and unexpected patient deaths in critical care.
- Consultant staff in particular felt demoralised about their service. Staff had become disengaged and morale was low. Staff were not confident that the QIP would address all the concerns they had about the service and ensure the safe care and treatment of cardiac surgery patients.
- Patient feedback was very positive. Staff treated patients with dignity and respect. Patients described the excellent quality care they received from staff.

Summary of findings

- Patients told us they had been involved in making decisions about their care. Staff took the time to speak with them and treated them holistically, rather than just focusing on their medical needs.
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Queen Elizabeth Medical Centre

Detailed findings

Services we looked at

Cardiac Surgery

Detailed findings

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Background to Queen Elizabeth Medical Centre

The cardiac surgery service at the Queen Elizabeth Medical Centre provides cardiac surgery to patients either as an elective (planned) case or as an emergency. The service performs a number of specialist cardiac surgery procedures as well as conventional surgery. Patients are referred locally and nationally to the service. A cardiac transplant service is also provided.

The patient pathway starts with assessments in outpatients. Patients are admitted to a specialist cardiothoracic surgery ward for their surgery. There are three dedicated cardiothoracic and transplant theatres (theatres 6, 7 and 9). Post-surgery patients are transferred to critical care, before returning to the ward for rehabilitation and recovery.

The service is funded for 36 ward beds and 20 level 3 equivalent critical care beds. Outpatient clinics are held at local hospitals to provide a more accessible service for patients and their families.

During our inspection, we visited all areas involved in the cardiac surgery pathway at the Queen Elizabeth Medical Centre.

We carried out a focused responsive inspection of the trust's cardiac surgery services on 22 and 21 December 2015.

Our inspection team

Our inspection team was led by:

Chair: Professor Edward Baker, Deputy Chief Inspector of Hospitals, Care Quality Commission

Head of Hospital Inspections: Joyce Frederick, Head of Hospital Inspection, Care Quality Commission

The team of eight included two CQC managers, two inspectors and an analyst, and three specialist advisers including, two consultant cardiac surgeons and a cardiothoracic theatre manager.

How we carried out this inspection

To get to the heart of people who use services' experience of care, we always ask the following five questions of every service and provider:

- Is it safe?
- Is it effective?

- Is it caring?
- Is it responsive to people's needs?
- Is it well-led?

Detailed findings

We carried out a short notice announced inspection on 21 and 22 December 2015. The trust were notified of the inspection on 14 December 2015.

Before visiting cardiac surgery services at Queen Elizabeth Medical Centre we reviewed a range of information we held about this service and asked other organisations to share what they knew about the cardiac surgery service.

During the visit, we visited the cardiac surgery ward, critical care, theatres and outpatients. We held two focus groups and spoke with a range of staff, including nurses, theatre staff and medical staff of all grades, working

across cardiac surgery, cardiology and critical care. We also interviewed relevant senior managers and members of the trust executive team. In total, we spoke with approximately 95 staff.

We spoke with five people who use the services provided by cardiac surgery. We observed how people were being cared for and reviewed care or treatment records of four people who used the service.

During and after the inspection we reviewed a range of information, related to cardiac surgery services provided by the trust.

Facts and data about Queen Elizabeth Medical Centre

- This looked at in-hospital mortality within 30 days.

Benchmarking data – (2011 to present)

- Length of stay - longer when compared to all trusts in England. For pre-op stay for all patients and length of stay for patients over 75 years of age. The trust has the highest percentage of patients staying over 30 days.
- Highest readmission rate (2009/10 to present) 25%, compared to England average 10%.
- Highest in hospital crude death rate 3.5%; England average approximately 2.3%.

- **Caring**

- Friends and Family Test results were good for the coronary care unit, ward 304 and ward 306. Over the 12 months (December 2014 to November 2015), average percentage recommending for (54% response rate), ward 304 was 98% (42% response rate) and (54% response rate).

- **Responsive**

Referral to treatment times (RTT) - January 2015 - November 2015

- RTT performance above the 92% standard. However, recent issues have been raised in data quality which is expected to adversely impact the performance. A forecasting process was in progress to establish the extent.
- In-patient waiting – waits for surgery from the date of listing fluctuate between surgeons and range from 2 weeks to 30 weeks.
- Out-patient waiting - waits for a new outpatient appointment are within the 6 week Trust standard. Follow up appointments are outside of this standard.
- Trust submitted data on cancelled procedures. This showed that over the 12 months (December 2014 to November 2015) 25% of elective cardiac surgery procedures were cancelled on the day of surgery for non-clinical reasons. In November 2015, 49% had been cancelled for non-clinical reasons.

Surgery

Safe

Effective

Caring

Responsive

Well-led

Overall

Good



Information about the service

The cardiac surgery service at the Queen Elizabeth Medical Centre provides cardiac surgery to patients either as an elective (planned) case or as an emergency. Patients admitted for emergency surgery come mainly via the emergency department or inter-hospital transfer. Between December 2014 and November 2015 a total of 936 operations were performed. A cardiac transplant service is also provided, with on average 30 transplants and 65 retrievals performed each year.

The Care Quality Commission (CQC) received notification of potential concerns regarding patient outcomes following cardiac surgery at University Hospitals Birmingham NHS Foundation Trust. There were two separate sources of statistical analysis:

1. We were notified of an outlier alert for in-hospital mortality associated with coronary artery bypass graft ('CABG (other)') procedures 26 August 2015
2. We were notified on 11 September 2015, of an outlier alert for in-hospital survival rates following adult cardiac surgery, generated by the National Institute for Cardiovascular Outcomes Research (NICOR) in association with the Society for Cardiothoracic Surgery in Great Britain and Ireland (SCTS) (April 2011 to March 2014). The data was formally notified to the trust in August 2015 and published in September 2015. The trust was first alerted to concerns March 2015.

We requested information from the trust on the actions taken in response to the outlier alert on 4 September 2015 and requested information on trust's audit outcomes for adult cardiac surgery. The trust responded to us on 14 September 2015 and identified 'significant methodological issues' with the outlier data and told us they had

implemented a quality improvement programme. The trust challenged the statistical methodology that had been applied. We received confirmation from Imperial College and NICOR on 15 October 2015 that the statistical analysis of the outlier information was accurate. The outlier data is risk adjusted and is therefore not linked to the complexity of surgery.

We carried out a short notice focused responsive inspection of cardiac surgery services on 22 and 21 December 2015. The inspection was announced to the trust on 14 December 2015. We inspected this service because of the serious concerns relating to cardiac surgery mortality and a lack of specific information provided by the trust on actions taken in response to these concerns.

We followed the pathway for patients and inspected the pre-operative assessment, operative care (in theatres), post-operative critical care and care on the cardiac ward. We did not inspect heart transplant surgery. We inspected cardiac surgery services, which is part of a surgical services core service. We have therefore not provided ratings for this service.

During our inspection we visited outpatients, ward 306 (cardiothoracic surgery ward), three theatres allocated for cardiothoracic and transplant surgery (theatres 6,7 and 9) and Area D of critical care, where patients are transferred to post cardiac surgery. We spoke with approximately 95 staff working across these areas, including nurses, theatre staff, medical staff of all grades and allied health professionals. We observed staff providing care to patients, spoke to five patients, reviewed four patient records and analysed data provided by the hospital both before and after the inspection.

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Summary of findings

- The cardiac surgery service had been identified as a significant mortality outlier when compared to similar services. The cardiac surgery service monitored patient outcomes, but the results of this monitoring were not used effectively to improve quality.
- The trust had only recently started a quality improvement programme (QIP), despite concerns being identified in 2013 during an internal review and consultants approaching the executive team in 2014 with concerns around patient mortality and morbidity. The trust was also informed about the NICOR mortality outlier in March 2015. The trust had failed to take effective action in response to these concerns. There had also been many concerns raised by staff with service, divisional and trust leads that had also not triggered effective action. Some staff we spoke with were not aware that the service had been identified as a significant outlier through a national audit and national outlier programme, nor that a QIP had been started by the trust.
- The cardiac surgery service had no vision or strategy and lacked clear clinical and operational leadership at service and divisional level. This resulted in a service that was fragmented and dysfunctional, with departments working in isolation rather than as a team. There were delays in decisions being made both clinically and organisationally which had impacted on patient care. The service had not anticipated, and was not monitoring, the impact of taking an increasing number of complex patients for transplant surgery which had decreased the volume of routine operations.
- There were significant concerns around the lack of governance processes to monitor quality, safety and risk. Patient outcome data was collected but was not shared or used effectively by the service to improve quality. There was insufficient attendance, and challenge about patient outcomes, at mortality and morbidity meetings and multidisciplinary team

meetings. The service did not consistently take account of relevant national guidance and evidence based practice to ensure a standardised approach to patient care and treatment.

- The Five Steps to Safer Surgery were not always completed to minimise the risk of avoidable harm to patients. Surgical trainees were not always supervised by a consultant in theatres when it was appropriate to do so. There had been instances where it had been difficult to quickly locate a surgeon when a complication had arisen in theatre. Some operations took longer than expected and patients were on bypass for long periods and higher than expected use of blood products. Re-bleeding rates post-surgery were higher than expected, and proportion of patients having to return to theatre for exploration and further surgery was much higher than nationally.
- Consultant cardiac surgeons did not consistently undertake ward rounds on the cardiac surgery ward, they were not always in theatre at appropriate times and they were failing to effectively communicate with nursing staff and intensivists in critical care.
- There was a high rate of cancellations for elective patients (planned surgery), with some patients' surgery being cancelled on multiple occasions. Staff repeatedly raised concerns about cancellations and the impact on patients as well as the morale of staff. The majority of cancellations were due to a lack of critical care beds and staffing. However, there were also institutional behaviours of surgeons including late starts to operations, extended length of operation times and waiting for confirmation of a bed in ITU, often resulted in the cancellation of the second case. Actions to decrease the number of cancellations were not having sufficient impact. Weekly meetings took place to review cancellations but there had not been significant change or action by the trust despite the data being collected. Clinical staff had identified areas for improvement, for example, a step down cardiac ward, but there were not clear plans to implement these changes.
- There was no monitoring of risk for patients whose surgery had been cancelled or those who were on

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the waiting list for longer than they should be. Waiting lists were not shared across surgeons via 'pooling', which resulted in some patients waiting longer than the 18 week target. Cardiologists at the trust were increasingly referring patients to other local hospitals for surgery due to the shorter wait times, fewer cancellations, and good patient outcomes. This was leading to a low volume service with associated risks

- Staff described a bullying and blame culture in theatres and critical care. Staff found it difficult to raise concerns or challenge poor performance and behaviours. Staff did not always report incidents; where these were discussed the blame culture prevented an open discussion to encourage learning and improvements to patient safety.
- There were issues regarding low staffing numbers and the insufficiency of training for staff to undertake their role. There were vacancies in theatres that resulted in operations being cancelled or staff working additional shifts. Nursing staff in critical care were concerned that they had not up to date knowledge and skills to look after cardiac patients or training in the specialist equipment they required. Medical staff in critical care were not all cardiac trained and at night there were difficulties accessing the on-call surgeon or the consultant anaesthetist. There had been a number of near misses and unexpected patient deaths in critical care.
- Consultant staff in particular felt demoralised about their service. Staff had become disengaged and morale was low. Staff were not confident that the QIP would address all the concerns they had about the service and ensure the safe care and treatment of cardiac surgery patients.
- Patient feedback was very positive. Staff treated patients with dignity and respect. Patients described the excellent quality care they received from staff.
- Patients told us they had been involved in making decisions about their care. Staff took the time to speak with them and treated them holistically, rather than just focusing on their medical needs.

Are surgery services safe?

By safe, we mean that people are protected from abuse and avoidable harm.

We have inspected but not rated this service.

- Staff knew how to report incidents but the majority of incidents reported were by nursing staff and were not clinical. Incidents were not always graded appropriately to indicate the severity of the incident; the majority of incidents were graded as minor. Staff had identified a blame culture in critical care and theatres and said they did not report all incidents. Medical staff reported few incidents and medical staff we spoke with told us they did not always recognise incidents of no harm as incidents that should be reported. The learning from incidents was not shared across all areas within cardiac surgery.
- There was not consistent attendance at mortality and morbidity review meetings, or sharing of mortality outcomes for individual surgeons for learning purposes.
- There were concerns about the skill mix of staff on critical care. There had been incidents where staff did not always assess risk or recognise the signs of a patient who might deteriorate and communicate concerns appropriately.
- Nursing staff in critical care no longer completed competency based training for the specialist cardiac equipment they used. This was a safety risk to themselves and patients.
- Staffing rotas were not being assessed for risks. Consultant anaesthetists were sometimes on-call for theatres and critical care at the same time. On call cardiac surgeons were scheduled in theatre for the next day. If there was an emergency, the second on call team in theatres was not always covered.
- Surgeons were sometimes late for the briefing prior to surgery and some left theatres prior to the debrief taking place at the end of the session. There were occasions where consultants did not supervise trainee surgeons for the entire operation and occasions when consultants had not been in theatre to respond to urgent concerns from trainees. Documentation audits for the Five Steps to Safer Surgery showed a high level of compliance but an observational audit had not yet taken place.
- Medical staffing rotas and staff availability meant that patients were not always cared for by a surgeon or

Surgery

doctor with the appropriate level of skill, knowledge and experience. This was particularly in theatres and on the intensive care unit. There was not sufficient medical cover for senior and junior doctors across the patient pathway.

- Nursing staffing in critical care was under pressure when they had to care for patients who required monitoring by two nurses. There was also a high use of agency staff some of whom could not perform some necessary tasks.
- Staff vacancies in theatres contributed to the cancellation of some operations. Theatres staff worked additional shifts to cover gaps in rotas but theatres were not always staffed according to national guidance. The theatre manager was not aware of this guidance.
- Nursing staff in critical care did not have access to enough equipment to monitor patients appropriately. Staff completed daily checks on emergency equipment but some out of date items were found on the ward.
- Consultant cardiac surgeons did not always write in patient notes when they visited patients on critical care. Nursing staff recorded the visit to ensure all staff knew the treatment plan for patients.
- Documentation audits for patient records did not always take place every six months based on the trust's policy to ensure key standards were being met.
- Standard operating procedures to protect patients safe from avoidable harm were out of date in theatres, and staff compliance with these was not monitored or audited.
- The storage room in theatres was untidy, with equipment, medical devices and staff lockers in the same room. Items were not easily accessible.
- Best practice in theatre was not always followed for medicines management, particularly safe storage.
- There was poor compliance by medical staff with the trust mandatory safeguarding training.

However,

- Nurse staffing levels on the cardiac ward were appropriate.
- The advanced nurse practitioner (ANP) role was seen as a positive initiative to support patients across the care pathway.
- Overall staff followed infection control practices appropriately and kept clinical areas clean and tidy to minimise the infection risk to patients.
- Overall most staff were up to date with their statutory and mandatory training.

- There were business continuity and major incident plans in place, for emergency situations.
- Medical documentation audits showed good compliance overall to standards.

Incidents

- Staff knew how to report incidents and were aware of their responsibility to report incidents. The trust provided training to staff as part of the corporate induction programme.
- Approximately 450 incidents and one serious incident had occurred between December 2014-November 2015 for cardiac surgery. The serious incident was an unexpected patient death in theatre. A report had been provided for this but had not been listed on the incident data provided by the trust. This incident had been fully investigated and number of recommendations made, including reviewing the layout of theatres and offering support to staff after a significant event had occurred. An action plan was in place and progress against each action was monitored and updated.
- Incident data provided by the trust (December 2014 to November 2015). The incident data indicated patients who had died during surgery, failure to escalate patients and potential treatment delays and incidents of avoidable harm. However, the severity of all incidents was graded as 'minor' with the exception of two as moderate. Minor harm is defined as any patient safety incident that requires extra observations or minor treatment and caused minimal harm to one or more patients.
- Staff in critical care and theatres told us they did not always report incidents that had occurred. They identified a blame culture around incidents, rather than incidents seen as an opportunity for learning and improvement to the quality of care for patients. Staff also told us changes were not made following regular incidents so they had stopped reporting them.
- Medical staff told us they raised concerns verbally rather than using the electronic reporting system, as they did not consider all of them to be incidents as no harm had occurred. They told us they did not directly use the incident reporting system but would raise with a nursing colleague to report if necessary. They would address some incidents directly with surgical colleagues or the medical director.
- Minutes from the quality improvement programme meeting identified the need to review incident reporting

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to ensure all staff were reporting all incidents and they were coded correctly. Analysis had shown that staff were reporting nursing rather than clinical incidents. Medical staff reported few incidents.

- Senior staff told us they discussed incidents and learning at governance and team meetings. They had received training in how to complete a root cause analysis (RCA) investigation. The divisional nurse met with the risk adviser on a monthly basis to discuss incidents that had occurred in their division. Some but not all frontline staff told us that managers shared feedback and learning from incidents at team meetings. We saw minutes from ward meetings that showed recent incidents had been discussed. Learning was also shared with staff via email or during handovers.
- The duty of candour is a regulatory duty that relates to openness and transparency and requires providers of health and social care services to notify patients (or other relevant persons) of 'certain notifiable safety incidents' and provide reasonable support to that person. Staff we spoke with had not received specific training on Duty of Candour, but gave examples of where they had applied the principles of being open and honest. Managers and senior staff understood their additional responsibilities around informing and meeting patients and the investigation of incidents
- The risk and compliance team reviewed all incidents for reported level of harm. If the team identified an incident that indicated harm, they applied the Duty of Candour process and tracked the incident. There were four reported cardiac surgery incidents where Duty of Candour had been completed and a further six recent incidents which the team were reviewing
- A national audit and a national outliers programme had identified the cardiac surgery service as a significant mortality outlier when compared to similar services. The service held monthly mortality and morbidity meetings. The meetings were part of the cardiac surgery clinical governance meetings. Meetings were attended by staff from the multi-disciplinary team involved in caring for cardiac surgery patients, However, there was not always a member of staff for each team or speciality (such as cardiology, anaesthesia, intensivists), present at every meeting to enable a robust discussion. The meetings followed The Royal College of Surgeons (RCS) guidelines and discussed individual cases and learning points. Minutes from the meeting were shared with staff. Medical staff told us the meetings did not review trends

or compare individual surgeons' outcomes to help identify ways to improve the service. Sometimes two or three surgeons were unable to attend the meetings due to other commitments. Although the RCS template was used for the meetings, staff told us there was not a constructive environment for discussion during the meetings. Surgeons became defensive and felt challenged if questioned about cases, sometimes confrontational. Many cases were reviewed by registrars and the reviews were not detailed or specific to identify areas of suboptimal care, avoidable death or where care could have been improved. We reviewed minutes of these meetings and these did not identify if and when specific actions that had been identified had been followed up.

- One consultant had completed a detailed review of his morbidity and mortality and presented findings in November 2015. This review followed the RCS guidance and had identified areas where care could be improved.

Safety thermometer

- The trust monitored its safety performance through the use of NHS safety thermometer. The NHS safety thermometer provides a monthly snapshot audit of the prevalence of avoidable harms that occur including pressure ulcers, falls, venous thromboembolism (VTE) and catheter related urinary tract infections (UTI). The percentage of patients receiving harm free care is also reported.
- For December 2014-November 2015 there were five months where 100% of patients received harm free care. For the remaining seven months the average was 95%. Reasons for harm included pressure ulcers, incidence of VTE and catheter related UTIs.
- There was evidence of action on catheter related UTIs. The trust's continence advisory group were reviewing the findings from a recent audit on catheter related UTIs. Thirty-five patients required a catheter, with four catheter related urinary tract infections between December 2014 - November 2015. They were to submit an action plan to help reduce the number of infections.

Cleanliness, infection control and hygiene

- In theatres, staff had taken the laryngoscopes (used for opening the airway) out of the packet and placed these on a trolley. There was a potential risk of cross infection and dust settling on the equipment prior to use.

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- On the ward, the labels on two sharps boxes which were in use had not been completed. It was not possible to trace the location, hospital or date the box had been opened.
 - The ward and outpatients were visibly clean and tidy. We saw 'I am clean' labels on equipment in critical care and the ward, but not in theatres to confirm the equipment had been cleaned and was ready for use.
 - The hospital screened patient for methicillin-resistant staphylococcus aureus (MRSA) as part of their pre-operative assessment. We looked at two set of notes and staff had completed these checks, although for one patient the result was not in the notes. The trust provided treatment for patients with MRSA prior to them being admitted for surgery.
 - There had been three cases of clostridium difficile infection on the ward between December 2014-November 2015. The ward manager told us ward staff would allocate a side room to any patient identified as having a potential infection risk. During our visit, we saw a deep clean taking place in response to an infection incident, with the patient moved to a side room. Staff told us the cleaners came promptly, normally within 10 to 15 minutes.
 - We observed staff cleaning their hands before and after providing care to patients, to minimise the spread of infection. Staff used personal protective equipment such as gloves and aprons to keep themselves protected from infections and body fluids. Hand sanitiser points were in place at the entrance to the wards and critical care for visitors to use, to reduce the risk of infections being passed to patients.
 - The trust completed regular infection control audits, these included hand hygiene and infection rates for patients with a cannula in place. On the ward and in critical care, staff exceeded the hand hygiene compliance target of 85% for every month between September 2015 - November 2015.
 - On the ward, staff followed a peripheral venous cannula site care plan to reduce the risk of infection to patients.
- Environment and equipment**
- Critical care nursing staff and cardiac surgeons raised concerns that there was a lack of training for nurses on the specialist cardiac equipment used to care for cardiac patients. They had not completed any competency based training to use this equipment. This was putting the patient and staff at risk. This did not meet the core standards for Intensive Care Units (2015), which states 'All staff must be appropriately trained, competent and familiar with the use of equipment'. Since the inspection, the trust has advised CQC that specific competency based training for this specialist equipment will be provided for critical care nursing staff.
 - A critical care nurse told us they sometimes did not have enough equipment to complete cardiac output studies for patients after their surgery. They also did not always have access to carbon dioxide monitoring equipment. They now kept a machine on the resuscitation trolley to ensure one was always available. We observed the monitor on the trolley. The staff had raised this as a concern, but told us their senior managers had told them there were enough monitors across critical care as a whole.
 - The storage room between theatre six and seven was untidy. Staff were unable to easily access all items in the room, creating a potential health and safety risk. Staff lockers were also in this room, along with medical instruments, gas cylinders, equipment and medical device implants. Staff told us that risk assessments had not been completed for the safe storage of these implants with the other equipment.
 - Staff disposed of clinical waste appropriately. Overall, clean and dirty items were stored in the appropriate area. However, in theatres a positioning bag and gel pad were stored in the dirty utility. Staff told us these were ready for use. There was a potential infection risk to patients due to where they were stored.
 - We checked two resuscitation trolleys, one in critical care and one in theatres. Records showed that staff had completed daily checks for both, to ensure all equipment was available in an emergency. Records showed that nursing staff had checked the chest re-opening trolley on the ward daily, but we found six out of date pieces of equipment on the trolley. This information was passed to the ward manager during the inspection.
 - Staff we spoke with knew how to report faulty equipment to either estates or clinical engineering. They told us they came promptly to repair equipment, normally within an hour or 24 hours depending on the urgency of the repair. Managers told us that clinical engineering managed the servicing contracts for equipment, they told us this system worked well.

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- We checked approximately 10 items of equipment, all had been serviced within the last year and had a sticker to show when the next service was due.

Medicines

- Medicines including controlled drugs, were stored securely in all areas, as per the trust Medicines Code policy. Nursing staff had appropriately checked and recorded stock levels and the issuing of controlled drugs.
- The fridge temperature checklist was signed and up-to-date on the ward. In theatre six, staff last checked the drugs fridge temperature on 16 December 2015, the theatre had been used on 17 and 21 December. In theatre seven, staff had not completed daily checks, it was not clear from the log sheet if the theatre had been closed or staff forgot to check. There was a potential risk that medications were not stored safely at the correct temperature.
- In theatres, we found an item of food in one of the drugs cupboards. This was not in keeping with trust policy. We also found two out of date medicines both items expired September 2015.
- Theatre staff used a blood fridge to store harvested veins rather than blood, this had not been risk assessed for safe storage. Staff were concerned about the distance to the main bloods fridge when on call and there were fewer staff in theatres to get the blood. This had not been risks assessed.
- A critical care nurse described an incident where staff had given a number of patients the wrong strength dose of an anti-clotting drug. Senior staff had investigated the incident and teaching was provided for staff on how to identify the strength of the drug on the medication cassette.
- Staff on the ward and critical care told us there was good access to pharmacy support and there were no issues with maintaining medicine stock levels.
- Advanced nurse practitioners had to complete an external course before they could become independent prescribers.
- One patient told us they were on multiple medications and they had received them on time during their stay on the ward.

Records

- Three critical care nursing staff told us the cardiac surgeons did not write in the notes for patients, when

they undertook visits in addition to the ward round. Nursing staff chose to write in the notes to ensure the information was available. They had not reported this as an incident as it had become custom and practice. We reviewed two sets of notes and a nurse had documented the additional visits.

- Trust policy required departments to complete documentation audits every six months, to ensure patient records met set standards. Nursing staff on the ward and in critical care were aware of their responsibility to do this. We reviewed the last three records audits, which showed not all teams were adhering to the trust target. The last audit for critical care nursing documentation was completed in October-November 2014, prior to this January-March 2013. The last audit for medical documentation for critical care was July 2015 and previously November 2014 and on the ward in 2013. Minutes from the July 2015 cardiac surgery governance meeting identified a high level of compliance with medical documentation overall but medical entries were not dated, timed and initialled. Nursing staff on the ward had kept to the trust target, with audits in April and November 2015. All departments had completed an action plan in response to the audit results, however they did not all contain timescales or a named person to monitor compliance. There was no assurance that required improvements had taken place.
- Patients' names and their consultant were displayed on an electronic patient board on the ward. The board was in a prominent position and we saw patients and visitors stopping to look at the board during the inspection. This was fed back to the sister on duty. Staff had not obtained consent from patients to display their personal details on the board. The sister was going to raise this information governance concern with a senior colleague.
- Documentation audits took place weekly for each theatre to monitor compliance with the WHO surgical checklist, which is part of the Five Steps to Safer Surgery. This data was reported on monthly and showed compliance was between 86% to 100% between December 2014 - November 2015. Data for the last 6 months showed 100% compliance for theatre 6, 7 and 9, other than theatre 7 in June 2015, with compliance of 86%, 96% compliance for theatres 6 in September 2015 and 99% compliance for theatre 9 in November 2015. Two members of staff told us they were not always told

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the results of the audit, so they could discuss as a team any areas for improvement. In theatres, some staff told us that some surgeons would not complete the WHO checklist. It was not possible to reconcile the comments from staff about the Five Steps to Safer Surgery with the audit data. No observational audits of staff completing the checklist were undertaken by the hospital.

- Advanced nurse practitioners were responsible for completing and documenting the patient pre-operative assessment.

Safeguarding

- Staff had to complete safeguarding adults and children training to level two as part of their mandatory training.
- Documents from the trust showed significant variations in the percentage of staff from cardiac surgery services that had completed this training, as of December 2015. Only 14% of consultants had completed the training, whereas compliance was 100% for auxiliary nurses. The trust target was 90% compliance.
- Senior staff knew who the safeguarding lead was for the trust, if they had a concern they needed to discuss.

Mandatory training

- The trust statutory and mandatory training programme contained nine modules, including manual handling, hospital life support, medicines management and fire training. Current overall compliance for cardiac surgery services was 85%, the trust target was 90%.
- Staff we spoke with across the service told us they were up to date with the training and they had time to complete it. They completed the majority of courses online. Critical care had a rolling whole day programme, to enable their staff to complete all their training on one day. This was easier to plan for and resulted in fewer disruptions to patient care.
- Theatre staff completed a specialist manual handling course due to the nature of their work. They completed this in theatres to simulate actual practice. Data indicated 76% across the service had completed manual handling training.

Assessing and responding to patient risk

- Standard operating procedures (SOP), to protect patients from avoidable harm were in use in theatres. These included a SOP for the swab, needle and instrument count within the operating theatre department. This SOP was out-of-date for review, due

2013. There was no assurance that the practices that staff were following were still safe. The trust required an annual audit of the SOP but this had not taken place. The trust have told us this SOP has now been reviewed and the updated version available to staff, via the trust intranet.

- The trust had a policy on the escalation, management and monitoring of acutely ill adult patients using the standardised early warning score. Staff on the ward inputted data from key observations onto the patient electronic record and a score was given to indicate the level of concern and response needed.
- Staff told us there was no set protocol for patient observations on critical care and this was based on professional judgement. The critical care staff told us they had completed accredited cardiac advanced life support training, this included open chest resuscitation. The course covered how to identify as well as respond to a deteriorating patient.
- Senior medical staff were concerned about the impact of increasing acuity and complex needs of patients post cardiac surgery on ITU. They told us junior trainee anaesthetists needed to concentrate on three or four very demanding complex patients and they could lose oversight of the work on less complex patients. There was a risk of insufficient assessment and response to risk in these patients. They cited incidents of near misses such as detached chest drains not identified or dealt with quickly.
- Two consultants mentioned there had been instances of 'near misses' on ITU. They also identified two recent 'failure to rescue' deaths (patient death after a treatable complication). These had not been recorded as incidents in the data from December 2014 to November 2015. One consultant had reviewed all their patients in 2014. The data identified five cases of 'failure to rescue' in 2014.
- The cardiac surgery consultants felt nursing staff did not always recognise the signs of a deteriorating cardiac surgery patient and communicate any concerns. A nurse told us blame was being placed on nursing techniques, but debriefs did not always take place so learning could take place.
- A protocol for the management of post-operative bleeding was in development to help support all staff. Also, all elective surgery patients were to be discussed at a multi-disciplinary team meeting and then a

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consultant surgical meeting, prior to them being added to the waiting list. This was to encourage discussion about patients at a higher risk of complications. These were planned but had not been implemented.

- Four members of staff in theatres told us that surgeons and anaesthetists did not always fully participate with the Five Steps to Safer Surgery. The briefing was sometimes delayed, as the surgeon was late for theatre; they were not always in theatre scrubs ready to start surgery after the briefing. The patient was sometimes already in theatre prior to the briefing taking place. Staff reported an incident where the surgeon was one hour late for the briefing. The theatre manager had proposed a standardised start time for the team brief, but staff did not adhere to this. Debriefs did not always occur as the surgeon had left theatre. This prevented the team from reviewing and learning from the cases that day.
- Theatre and anaesthetic staff also told us that some consultant cardiac surgeons were not available to respond to urgent concerns from trainee surgeons in theatre. The theatre team had given us two recent examples, where they had waited 45 minutes for advice or support for patients who became unwell during an operation being undertaken by a trainee. This did not meet the Good Surgical Practice Royal College of Surgeons of England (RCS, 2011) Guidelines on supervision and availability for trainees.
- A 'gold standard' audit tool document was in draft form. The service intended to use this observational audit to assess whether staff completed and recorded in the patient records, key checks at each stage of the pathway. For example, the Five Steps to Safer Surgery (World Health Organisation (WHO) safety checklist). Observational audits of the checklist had not yet happened.
- There were two on-call teams for theatres, but staff told us due to staff shortages the second team was not always covered. We saw a list was available of staff that could be called should the second team be needed in an emergency. This had not been risk assessed or logged as an incident.
- Staff told us the catheter laboratory was being used, but was not designed to review patients on heart and lung machines.

- Patient records had risk assessments, such as for the risk of falls or pressure ulcers, and these had been completed and reviewed. Critical care staff had checked for risk of pressure ulcers twice a day, due to their patients being at higher risk.

Nursing staffing

- The trust had completed a recent review of nurse staffing on the wards. On the cardiac ward, the ward manager would be supernumerary on the early shift Monday to Friday, to manage the staffing levels to meet the needs of patients. An additional registered nurse would work at night.
- There were two junior nursing vacancies on the ward. Staff told us there were always enough health care assistants (HCA's), but not always enough registered nurses.
- Percentage fill rates for shifts for November 2014-November 2015 confirmed this. More HCA's than planned covered day and night shifts, with percentage fill rates over 100%, other than for day shifts in November and December 2014. Fill rates for registered nurses were below 100% for all night shifts across all months other than November and December 2014, and January and May 2015 (Range 86% - 99.7%). Fill rates were worse for the last six months compared to earlier in the year. The hospital told us although shifts were not always filled, the number of staff on duty did not fall below the safe staffing levels as planned levels were higher than minimum.
- Staff told us agency staff completed their statutory and mandatory training as part of their contract with the agency provider. Agency staff could access the patient records system. Senior nursing staff regularly visited the ward to monitor staffing levels and help address any shortages. Staff worked across the cardiology and cardiac surgery wards to cover vacancies. Rotas showed there was a minimal use of agency staff on the ward.
- In critical care percentage fill rates for shifts for November 2014-November 2015 showed for unregistered staff, that all shifts were filled or exceeded planned levels other than day shifts in October and night shifts in November 2015. For registered staff, day shifts were as planned, other than fill rates of 94%-99%, between June-September 2015. The average use of agency staff across all shifts was 9%.
- On critical care, staff told us it was difficult to retain staff due to the stressful nature of the role. The complexity of

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procedures had increased and more patients required two nurses to care for them. This was putting pressure on the nursing staff and had increased the need for agency staff. Agency staff could not always give medications, which put additional pressure on permanent staff. This pressure was not always understood by looking at fill rates alone. Managers shared the number of agency staff over the whole of critical care to manage this risk. They also tried to use the same agency staff, who they knew were competent and could administer medications.

Theatre team staffing

- The theatre manager told us there were five vacancies in theatres, to reach the establishment of 38.
 - Staff told us theatres sometimes ran with four staff. The guidance from the Association for Perioperative practice 2011 recommends one qualified anaesthetic practitioner for each session involving an anaesthetic; two qualified scrub practitioners as a basic requirement for each session, unless there is only one planned case on the operating list; one trained circulating practitioner for each session and one qualified post-anaesthetic recovery practitioner for the immediate post-operative period. The minimum staffing requirement in theatre for major surgery could be four or five staff. However, the manager was not aware of this guidance.
 - The lack of theatre staff sometimes delayed the start of theatres. This influenced whether there was enough time for the second operation. If staff had been on-call in the night, there was not always enough staff in theatres the next day.
 - Staff shortages in theatres meant staff worked additional shifts or agency staff were used. This reduced the number of theatre sessions and patient operations that the hospital cancelled. Between September-November 2015, the hospital cancelled 16 out of 316 operations due to a shortage of theatre staff.
 - A risk assessment for the staff shortages had been completed. For safety reasons, managers were considering closing one theatre to ensure there was always enough staff to run theatres.
 - Agency staff were used to cover the retrieval service, as the department could not recruit to this post.
- Theatre rotas were provided for the year, but it was not possible to analyse them in detail. This was because staff were not allocated to a particular theatre or their role identified. Data on percentage fill rate for shifts was not recorded.

Surgical staffing

- There were seven cardiac surgery consultants in post, with one vacancy. There were two specialist registrars who were cardiac surgical trainees,
- There were no written criteria on the number of cardiac consultants that should be available. Rotas showed there were times when a number of consultants were on annual leave at the same time.
- An on-call consultant cardiac surgeons' rota was provided to ensure emergency cover during the week and at weekends. Rotas were reviewed for October-December 2015, there were no gaps shown on the rota.
- Staff had identified there not always a sufficient level of consultant cover on the cardiac ward or in critical care for day-to-day care. Ward rounds were completed twice daily. On the cardiac surgery ward these tended to be completed by the specialist registrar, consultant surgeons were not involved in ward rounds.
- A separate rota for transplant consultants was in use. Five consultants undertook transplant work. However, on a number of occasions between October-December 2015, the on-call and transplant consultant were the same person. There was a potential risk that the consultant may be needed for input into two emergencies at the same time. Also, the consultant on-call was often in the theatre the next day. This meant elective patients were cancelled as the consultant had worked during the night and was unable to work any further hours.
- Staff told us it was difficult to recruit and retain junior doctors. Locum doctors filled vacant shifts to ensure sufficient cover. Rotas we saw confirmed this. Managers had identified the lack of cover as a risk and added this to the divisional risk register.
- Medical staff were concerned that there was insufficient surgical cover and the cardiac surgical team had difficulty running a compliant rota. If running a compliant rota there was not always a resident surgeon on-site. Medical staff did not always have time to take protected rest time, which was putting themselves and patients at risk.

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- Health Education England had removed the cardiac surgical registrar post for ITU. There was no cardiac surgeon rota for ITU through the day, intensivists went to theatres to discuss concerns.
 - The consultant cardiac surgeons and a service lead were concerned that patient handovers in critical care were to middle grade general intensivists, rather than to the consultants or cardiac intensivists. They told us that the staff did not always have enough knowledge and experience to recognise clinical signs that needed an urgent response.
 - Consultant cardiac surgeons and critical care staff told us there was not enough suitably trained medical staff on the critical care unit at night. Rotas demonstrated the intensivists working at night were not always specialists with cardiac experience and or an appropriate grade. This meant there was a risk to patients who might deteriorate if this was not recognised and timely decisions did not occur. There had been two recent incidents of failure to rescue on critical care. Data from one consultant identified five incidents of failure to rescue in 2014. Consultant staff also identified 'near misses'.
 - Consultant anaesthetists were sometimes on the rota for critical care and theatres at the same time. They felt this was a risk to patient safety. One staff member has raised this through three different levels of management but nothing had changed.
 - Senior clinicians told us cardiac surgery, once a small service, had grown larger without sufficient medical cover across the patient pathway. Division A had been charged with reviewing medical staffing.
 - The advanced nurse practitioner (ANP) programme had been successful in supplementing junior doctor cover. The aim was for ANPs to provide 24 hour cover to support junior doctors. Nine ANPs were in post, some still in training; they were currently providing cover every day and three nights a when there was no junior cardiac surgery doctors providing cover (Tuesday, Wednesday and Thursday night). ANPs were first point of call for nursing staff. They contacted the registrar or consultant if needed.
 - A critical care practitioner's programme was starting but would take time to implement.
- emergency or major incident situation. Staff had to complete major incident awareness training as part of their mandatory training. For cardiac surgery, as of November 2015, 100% of staff had completed their training.
- There were no protocols in place to manage the cancellation and rebooking of elective (planned) surgery patients, when another patient needed urgent transplant surgery.
 - All senior nurses were expected to work clinical shifts on the ward, to help manage demand during winter pressures. Senior staff told us this enabled them to support teams and share learning across different teams.

Are surgery services effective?

By effective, we mean that people's care, treatment and support achieves good outcomes, promotes a good quality of life and is based on the best available evidence.

We have inspected but not rated this service.

- The cardiac surgery service had been identified as a significant mortality outlier when compared to similar services. Other outcome morbidity measures were worse than other cardiac centres, for example, re-bleeding rates, returns to theatre, length of time on bypass, use of blood products, and the time taken to perform certain procedures. Some staff had recognised and raised these concerns, but the trust had not responded to them.
- The cardiac surgery service monitored patient outcomes, but the results of this monitoring were not used effectively to improve quality. The service did not have a fully developed clinical audit programme. There was information on outcomes available but this was not used and not sufficiently shared across the service.
- The cardiac surgery service did not voluntarily participate in a national benchmarking scheme to compare outcomes, share and learn from best practice
- There was no monitoring of the mortality or morbidity risks for patients on the waiting list for long periods or subject to repeated cancellations of surgery.

Major incident awareness and training

- A trust wide business continuity plan was available and in date. This detailed the response by the trust in an

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- The service did not consistently take account of relevant national guidance and evidence based practice to ensure a standardised approach to patient care and treatment. There were different protocols in use, dependent on the individual surgeon's preference.
- There was not a standardised post-operative pathway for patients.
- Cardiac surgeons did not always attend multidisciplinary team meetings to discuss complex surgical patients or complete regular ward rounds. Teams tended to work well individually. The transfer of patients across teams was not always well co-ordinated.
- The service ran seven days a week. However there were not always suitably trained medical staff working at night and consultant surgeons did not see patients on the cardiac ward.
- Critical care staff had access to some specific training in cardiac critical care, they also learnt from other staff, however they reported their level of knowledge was not up to date.
- Health Education England had identified concerns with the junior doctor training posts.
- Patients were often without food or water for longer than necessary due to delays in decisions to cancel their surgery and this was a risk to cardiac patients.
- There was an incident when consent had not been appropriately obtained from a patient

However.

- The perfusionist team benchmarked their service.
- Patients had appropriate pain relief
- Protocols and guidelines were in development.
- The advanced nurse practitioners and registrars worked effectively together on the ward to plan and deliver care and treatment for patients.
- The majority of staff had completed an appraisal and staff, in general felt competent in their roles.
- Patients were supported to make decisions and consent was sought and documented in line with trust policy.
- Patients' pain and nutritional needs were assessed and managed appropriately.

Evidence-based care and treatment

- There was a general clinical cardiac surgery pathway in use for elective surgery patients. However, clear standards and references to national guidelines for each part of the pathway were not included. Agreed

standards, guidelines and protocols for each part of the pathway were to be written as part of the quality improvement programme. The wards and theatres were to agree what was needed by end February 2016.

- Cardiologists, intensivists and critical care nursing staff told us that there were no protocols to standardise the post-operative care of patients. Individual surgeons had different preferences for post-operative care, which was confusing for staff on critical care. Draft standardised protocols for post-operative care had recently been developed and circulated to staff for consultation. The work was ongoing and was due for completion between January-March 2016.
- The service did benchmark its service against a cohort of other centres, this benchmarking looked at length of stay, readmissions and in-hospital mortality. The cardiac surgery service did not participate voluntarily in the National Cardiac Benchmarking Collaborative. This enabled specialist cardiac centres to compare, share and learn from best practice. It also encouraged services to work together to provide greater consistency.
- Consultant surgeons monitored NICE guidance for updates to best practice. Data provided showed 14 pieces of guidance were relevant to the cardiac surgery service. They reported they were compliant with nine, one was under review and one was overdue a response.
- In critical care, the ventilator care bundle referenced National Institute for Health and Care Excellence (NICE) guidance on pneumonia. They also followed Intensive Care Society national guidelines on weaning a patient from ventilator support. This included patients who had undergone cardiac surgery.
- Protocols and guidelines for the new step down service for patients transferring from critical care to the ward had been developed, to ensure only suitable patients were referred to the service. The aim of the service was to transfer patients one day post-surgery, to free up beds in critical care. This was not being followed.
- The perfusion service visited and benchmarked against other cardiac surgery centres to ensure the quality of their service. They also had five yearly visits from The Society of Clinical Perfusion Scientists to review the standards of the service.
- There were protocols to support best practice in cardiac transplant surgery.

Pain relief

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- Patients told us, and we saw in patient records, that their level of pain had been assessed and they had been given medication to help manage their pain where needed. On the ward, patients told us staff normally responded promptly, when they pressed their call bell. These were placed within reach of the patient.
- Staff in theatres and critical care, used an analgesia (pain relief) protocol for post cardiac surgery patients, to manage patient pain immediately post-surgery. This gave clear guidance on which medication to use depending on the level of pain and when a consultant intensivist should be contacted. The document was dated, but did not have a review date, to ensure it continued to follow national guidance.

Nutrition and hydration

- Nursing and medical staff raised concerns that patients were fasted, for longer than necessary, when the decision to cancel their operation was delayed. The minutes from the cardiac surgery clinical quality working group (October 2015), acknowledged that cancellation decisions needed to be clear and made quickly; particularly when there were fasting patients awaiting surgery who could be at risk of dehydration. There was a medical risk to patients whose operations had been cancelled more than once and had been fasted on each occasion.
- Patients on theatre lists as a first and a second case were nil by mouth (NBM) from midnight. This was recognised risk for a second case patient and we heard of examples of patients being NBM for many hours longer than necessary, 16 hours in some cases. We were told by the governance team that a clear NBM protocol was being developed, for review and agreement 14 January.
- Nursing staff described how diabetes was managed safely, using intravenous products, when there were delays or cancellations to operations.
- We reviewed two sets of notes. For both patients the malnutrition universal screening tool (MUST) had been completed and reviewed in line with guidance. Staff had taken appropriate action depending on the score obtained for each patient.
- New measuring jugs had been introduced on the ward, to better monitor patient fluid intake. This was in response to a suggestion from staff.
- There was a mixed response from patients regarding the food. One patient told us the choice was excellent and

the food was of a good quality. They had provided feedback via the feedback form on the back of the menu; they thought this was a good way to involve patients. Another patient told us they had become unwell after eating the food, during their stay in hospital. They felt the choice for patients who had undergone major surgery was not always appropriate.

Patient outcomes

- The cardiac surgery service had been identified as an outlier alert for in-hospital mortality associated with 'CABG (other)' procedures, in August 2015, generated by the Dr Foster Unit at Imperial College London. The trust was also a significant outlier for in-hospital survival rates following adult cardiac surgery, as published in September 2015 generated by the National Institute for Cardiovascular Outcomes Research (NICOR) in association with the Society for Cardiothoracic Surgery in Great Britain and Ireland (SCTS) (April 2011 to March 2014).
- The outlier data is risk adjusted and is therefore not contributed to the complexity of the surgery or the pre-existing health of the patient. Transplant and mechanical circulatory support procedures are not included.
- The analysis of the data indicates more patients died after surgery than expected compared to other centres performing the same surgery.
- The trust had been informed of this data in March / April 2015. Trust concerns about data were also apparent in 2013. Outcome data had also been presented to the cardiac surgeons in 2014. The trust quality improvement programme was set up in response to this data. An initial meeting had taken place in September 2015, concerns were identified and terms of reference for working groups, including a data and outcomes group.
- Perfusionists and medical staff, in particular cardiologists and the cardiac surgeons, raised concerns around a number of aspects of operations, which they felt were affecting the overall outcome for the patient. These were the increased amount of blood products used, the length of time for each operation, and the amount of time patients spent on clamp and bypass. Also, re-bleeding rates post-surgery, the number of patient who had to return to theatre for exploration or

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further surgery and the total length of stay. Data on re-bleeding rates and the use of blood products was much higher, in some cases four times higher, when compared with other centres.

- Data for December 2014-November 2015 showed for 534 patients, 42 patients returned to theatre due to bleeding. Nine patients suffered a post-operative stroke, which was permanent for two patients. Thirty-two patients required dialysis post-surgery.
- Data from the trust showed surgeons performed 226 operations between September-November 2015. The average operation time was five hours six minutes, with on average two hours 30 minutes spent on bypass and one hour 30 minutes on clamp. The cross clamp and bypass times were longer than would be expected for some procedures. The time spent in the operating room not on bypass was also longer than expected, in some cases two to three times longer.
- National benchmarking data from 2011/12 to current date showed the trust had the highest average length of stay for patients over 75 years of age was 21.4 days (Range 13 to 21.4). The trust also had the highest percentage of stays over 30 days, which was 3.9% (Range 1.9% to 3.9%). Readmission rates were also high at 25%. This data also showed the trust had the highest in hospital mortality rate of 3.5% (Range 1.4% to 3.5%) (One other trust had the same result).
- Individual surgeons were concerned about their outcome data and had presented findings to colleagues and senior management in 2014, showing changes in outcomes from where they had previously worked. They told us nothing had changed despite them trying to raise these concerns. They had also identified that their outcome and mortality data was better for the surgical work they undertook at a local private hospital, as part of an NHS contract with the trust, compared to this hospital.
- Three surgeons told us there was no forum to discuss outcome data. They were aware of their own results, but not the service as a whole.
- Staff told us they were proud of the outcomes for patients undergoing complex or transplant surgery. We did not see the specific data for this type of surgery.
- Cardiologists were concerned that as a result of long waits or repeated cancellations patients were more unwell by the time they had surgery, resulting in a poorer outcome for the patient, during or shortly after surgery. The morbidity or mortality of these patients was not monitored by the service.
- Some internal audit took place, but there was not a comprehensive clinical audit programme for the service. This was an agreed action for development as part of the QIP. Theatre staff told us they did not currently take part in any audits.
- The service provided data to the Quality and Outcomes Research Unit (QuROU) at the trust. This unit reviewed the quality of the outcome measures that each unit used. Data gathered by the unit showed staff did not always give patients beta-blockers on discharge, post coronary artery bypass graft surgery. They highlighted this to staff and an improvement in performance was seen from 83% to 95% between 2013-2015. The goal was to achieve 100% compliance.
- Registrars uploaded surgical data after each operation onto the trust database, to ensure no bias by surgeons uploading their own data.
- A cardiac surgeon was audit lead for the service, and linked with the quality and outcomes research unit at the trust. They told us of historical challenges in ensuring accurate and robust data collection and disparities in data quality. This led to the development of different systems from July 2015. There was acknowledged reticence in sharing individual outcomes at mortality and morbidity meetings, which was now recognised as limiting learning and improving outcomes. The lead described a wide range of benchmarking information available to all in the trust. There was not regular dissemination and use of the data, or a culture of staff accessing the information. The aspiration was for audit and outcome data across the whole patient pathway, used to ensure outcomes for patients.

Competent staff

- Most staff told us they had received an annual appraisal during the last year. Trust data for the last 12 months supported this, showing that 94% of staff (excluding consultants) had received an appraisal. Four out of seven consultants had completed an appraisal and the remaining three were booked. There has been a gap of 16-17 months between appraisals for some consultants.
- The clinical lead discussed performance data for consultants at their appraisal. The audit lead provided

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consultant surgeons with their individual outcome data on a rolling three monthly basis so they and the service could monitor their performance. Individual mortality data was provided although this was not benchmarked internally. Consultants had been offered mentoring support where it has been identified as necessary. The actions taken to address poor performance where support was declined were not identified.

- There was a comprehensive competency based training programme for the recently introduced advanced nurse practitioner (ANP) role. Trainee ANP's always worked with a supervisor present so they could seek advice. They did not do any night shifts, other than for experience, until they the manager had signed off all their competencies.
- Professional development nurses provided educational development and training in cardiac nursing skills for ward staff. For example, a gap in knowledge in chest drains led to development of a standardised protocol and teaching session that was peer reviewed by medical staff. Nurses had received additional training ready for the opening of the step down unit on the ward.
- Nursing staff told us they needed more training on how to care for and support patients with mental health problems or substance misuse.
- Junior nurses in critical care followed a generalised competency programme with additional material covering cardiac related competencies and had support from a preceptor. The nurses we spoke with told us they were not able to keep pace with new medical and technological advances in cardiac care.
- Theatre staff commented that their training sessions were often cancelled. They told us they found this frustrating when training was cancelled to cover theatre lists.
- Trainee surgeons told us there was no formal departmental induction only the trust corporate induction programme. They were concerned that the number of cancellations impacted on the number of operations that trainees, particularly more junior trainees, could undertake. They found it difficult to gain experience doing more routine surgery, due to the service performing a greater number of complex cases.
- A review by the Health Education England, discussed at the cardiac surgery speciality meeting in January 2015,

had identified that the caseload and case-mix for junior staff was not providing a good level of basic training. The deanery had removed the cardiac surgical registrar post for ITU.

Multidisciplinary working

- Consultant cardiac surgeons did not meet to discuss outcomes for patients. Some consultants did not know how to access their individual outcome data and some thought that this was still restricted. The consultants did not share outcome data across the service.
- There was not a forum where consultant cardiac surgeons, cardiologists, cardiac intensivists, general intensivists, nursing staff, theatre staff and perfusionists met as a multi-disciplinary team.
- Staff gave mixed responses when asked about multi-disciplinary (MDT) working. Nursing staff on the ward told us they worked well with the ANP's, registrars and junior doctors who were based on the ward. They were approachable and easily contactable for advice.
- Nursing staff told us that consultants did not regularly come and see their patients on the ward. Some consultants did not complete a ward round even once a week, it was the responsibility of the registrar to lead the care of the patient. Consultants had time allocated into their weekly job plan to see patients on the ward. However, the joint ward rounds between the registrars and the ANP's were well-structured and provided nursing staff with sufficient information. Some nurses did not feel they could contact the consultant direct if they had a significant concern about a patient, they would speak with a junior doctor instead.
- Nursing staff in critical care told us they often had to be the link between the surgeons and the intensivists, chasing up decisions about care for patients. This was time consuming and reduced the time they could spend with patients.
- There was a weekly MDT meeting where complex patients due to be listed or admitted for surgery were discussed. The attendance list included the range of staff across the service and a geriatrician. Not all cardiac surgeons attended MDT meetings regularly. The team reviewing cardiac services was looking at attendance at the MDT meetings and the location of the meeting. The current location meant surgeons were late for the start of their theatre list or had to leave the meeting early. The trust had not allocated time to attend these meetings in the current job plan for consultants.

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Cardiologists told us, and we saw emails to divisional leads, regarding poor attendance at the MDT meetings by consultant cardiac surgeons making it difficult to make joint decisions about a patient's treatment.

- ANP's attended the weekly MDT meetings. Nursing staff on the ward did not attend these meetings to support their professional development, they relied on feedback from the ANP's
- A number of staff told us that the teams within each part of the service worked well together, for example, the transplant team. However, it was difficult to have joined up care across the service. Lack of joint working meant there was a delay in making a decision to cancel surgery or access to a bed in critical care.
- The transplant MDT consists of A&E Consultant, deputy MD, a cardiologist, Intensivist, senior nurse on ITU, WCCD manager, senior registrar. Staff told us the MDT works well.

Seven-day services

- The cardiac service held outpatients clinics on weekdays.
- Theatres ran elective surgery lists Monday to Friday, during the day. Surgeons performed emergency surgery every day of the week, including during the night if needed.
- Critical care was a seven-day service but intensivists working at night were not always specialists with cardiac experience and or an appropriate grade.
- The cardiac surgery ward was a seven-day service but consultants did not regularly undertake ward rounds.
- Nursing staff told us ward rounds took place on a daily basis, these were jointly lead by the registrars and ANP's.
- An ANP was present on the ward every day from 7.30am - 8pm and provided a link between the nursing and medical staff. They also provided cover for three nights per week with the aim of providing 24/7 cover. The executive team felt the development of the ANP role was a key part of the quality improvement programme for cardiac surgery services, to improve the throughput of patients.

Access to information

- Records were predominantly electronic and all staff, including agency staff, had access to these in all the areas we visited. Staff did not raise any concerns around access to patient information

- Advanced nurse practitioners collated the information for the discharge summary. This contained mandatory information boxes, to ensure the patient's GP had sufficient information to continue care for the patient within the community. A printed copy of the letter was sent to the patient's GP and the patient. Some GPs were able to access the electronic records system used by the hospital.
- A nurse took time to go through the discharge letter with the patient, prior to discharge, to ensure they understood when to take any medications and when they needed to attend for follow-up.
- For April-September 2015, the hospital distributed 80% of outpatient letters for cardiac surgery patients within 10 days of the staff member dictating the letter. The trust target was 85% or greater.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- Patients told us they received sufficient information to enable them to make an informed decision and give consent for surgery.
- A member of staff described how they had supported a patient with a learning disability and their family so the patient could give consent.
- Three staff independently described the same situation where medical staff had not followed the trust's consent to examination or treatment policy and surgery had gone ahead. There was not a completed consent form for an elective patient who was in theatre and under anaesthesia. This was realised by theatre staff and brought to the attention of the lead surgeon. The medical director gave permission for the surgery to go ahead. Theatre staff completed an incident form and senior staff held a meeting with all staff to discuss the incident. Theatre staff felt they had been overruled, despite trust policy not being followed and the Five Steps to Safer Surgery had not been fully completed. This would have identified that the consent form was not present.
- Theatre staff also raised concerns that ward staff sometimes sent a patient to theatre without checking that the patient had a completed consent form. Ward and anaesthetic room staff should have initialled the checklist in the patient care plan, to confirm that a form was in the notes.

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- We checked two sets on notes, these both contained a completed consent form for the patient, which included the risks and benefits of surgery.
- To monitor adherence to the policy an annual trust wide audit took place to review the quality of written consent taken. The last audit for cardiac surgery took place in 2014. Eighteen outcomes were reported on, 100% compliance was only achieved for three outcomes. No action plan or narrative was provided with the audit results, to show actions the service had taken in response to the results.
- The trust provided training for staff on the Mental Capacity Act (2005) and its associated Code of Practice as part of the trust statutory and mandatory programme. Staff in the focus groups told us they had completed this training.
- A member of staff appropriately described a situation where they had used this training when they submitted an application for a Deprivation of Liberty Safeguards (DoLS).
- All patients told us their care had been good or excellent. Staff were friendly, kind and compassionate. They made the time to speak to them and ensure their care needs were met. Patients on the ward commented that staff were busy, but did get things for them when they asked.
- We observed care being provided to patients in outpatients, on the ward and in critical care. At all times the patient's privacy and dignity was maintained. During personal care, staff drew the blinds or curtains. Where possible nurses offered patients a choice for some aspects of their care, for example, where to eat their meal or take a rest, in bed or in their chair.
- Some patients had an extended time in hospital and it was evident they had built a friendship with nursing staff. This meant they could talk about more everyday things and not have to focus on their surgery all the time.
- One patient described how a nurse in critical care, had held their hand to offer reassurance and show compassion, during a difficult time emotionally.
- Friends and Family test results for the cardiac ward showed for the last 12 months, that 92% or more of patients who had undergone surgery would recommend the hospital to friends and family. For three of the 12 months, the score was 100%. The staff Friends and Family test showed over the same period, that 93% would recommend the hospital as a place for treatment.
- There had been a decline in the patient Friend and Family test response rate, from 80% in December 2014, to 24% in September 2015. During the last two months, the rate had started to increase again. The trust were considering ways to increase the response rate across all services.

Are surgery services caring?

By caring, we mean that staff involve and treat patients with compassion, kindness, dignity and respect.

We inspected but did not rate this service.

- Patient feedback was very positive, which was supported by data from the Friends and Family test, showing the majority of cardiac surgery patients would recommend the hospital as a place for treatment.
- Staff treated patients with dignity and respect. Patients described the excellent quality care they received from staff. Staff took the time to speak with them and treated them holistically, rather than just focusing on their medical needs.
- Staff gave detailed but clear information to patients, in a way they could understand. Patients told us they had been involved in making decisions about their care.
- There was good emotional support offered to patients both before and after their surgery. Patients were encouraged to manage their own health and care, where possible and undertake activities to help with their wellbeing.

Compassionate care

Understanding and involvement of patients and those close to them

- All patients told us they have received clear verbal explanations about their care, treatment, and reasons for surgery from staff. Medical staff had explained the risks and benefits of surgery to them and patients felt involved with the decisions that had been reached.
- Two patients told us ward staff had advised them during their admission that the hospital may have to cancel their operation on the day of surgery, due to another patient needing a heart transplant. Patients were

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accepting of this, but equally hoped their surgery went ahead as planned. One patient told us their operation had been cancelled. They had received an explanation why and their surgery went ahead the next day.

- Patients knew their expected time in hospital after surgery and when they could be discharged.

Emotional support

- Patients and their families were offered emotional support and counselling from the surgical care practitioners, who ran pre and post-operative clinics, alongside the consultant clinics. Patients could also seek additional advice from the advanced nurse practitioners, during their pre-assessment visit.
- Patients were given time to ask questions during their outpatient appointments, so they could manage their care and wellbeing themselves.

Are surgery services responsive?

By responsive, we mean that services are organised so that they meet people's needs.

We inspected but did not rate this service.

- The trust did not plan cardiac surgery services effectively so as to meet the needs of local people. The number of routine, conventional cardiac surgery procedures had decreased (and was low volume) with the service was doing more complex work. The service had been accepting more complex cases than could be managed by available resources and capacity.
- Cardiologists within the trust were referring routine patients to other local hospitals for cardiac surgery, due to concerns about the service.
- There was theatre time and cardiac critical care beds identified for the service, based on historical activity and modelling, and the hospital was not managing these productively to meet service demands.
- Clinical staff had identified for areas for improvement, for example, access to ITU beds and step down cardiac ward beds but there were not clear plans to implement or address these changes.
- Patients were frequently unable to access the service in a timely way. Cancellation rates for elective cases were high. The service had cancelled 25% of operations for non-clinical reasons (between December 2014 and

November 2015). The main reason for the cancellations was no access to a bed in critical care, to theatre and staffing levels. Many patients had been cancelled more than once.

- Theatre sessions frequently started late, due to the consultant not being present. There was an early cut off time for second patients on the list and this delay contributed to cancellations. There were also delays for emergency surgery.
- The pathway for critical care patients had not been reviewed for effectiveness and efficiency. Theatres were underused, patients, especially complex patients had a longer length of stay on critical care which removed available beds from the service and there were delays in discharging patients from the cardiac ward.
- An action plan to reduced cancellations implemented in July 2015 was not being followed and did not have a significant impact.
- Many patients were waiting over 25 weeks for surgery. This was longer than the national waiting time target of 18 weeks.
- Outpatient clinics were under used. The do not attend rate (DNA) for new patients was high (19%). There was no clear action being taken in response to this high DNA rate.
- New outpatients were being seen within 18 weeks but follow up patients were waiting a longer time.
- The trust cancellation rate for outpatient appointments within six weeks for follow up patients was higher than trust targets.
- Most complaints were made about delayed or cancelled surgery. There was no evidence of learning as a result of complaints.

However,

- A multidisciplinary executive team had recently started to review all referrals for complex surgery to ensure they could be managed.
- The trust had started plans to improve the responsiveness of the service, with commissioners and through improvements to the surgical pathways.
- Theatre managers were considering extending theatre operating times, but the department needed to recruit more staff
- The service was meeting patient's individual needs, for example making reasonable adjustments for a learning disability or providing support to families. All areas we visited were accessible to people with a disability.

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- Information from complaints was shared with staff.
- The new outpatient appointment cancellation rate was within the trust target.

Service planning and delivery to meet the needs of local people

- The service undertook complex and routine cardiac surgery. The trust had a successful business case to do a limited number of complex surgery procedures (aortic and transplantation /Ventricular Assist Device (LVAD)) / mechanical circulatory support) requiring level 4 critical care. Since it started the service had been accepting more complex cases than could be managed and had outgrown allocated resources.
- The planning and resourcing of the service was based on historical data using national modelling tools. An annual planning programme was started in 2015 to align commissioning, planning and delivery of services, including cardiac surgery
- There were 20 level three beds in critical care allocated to cardiac surgery patients. These were not dedicated beds for this service. The hospital used these for other patients as well as cardiac surgery patients. Level three beds were for patients needing one to one care. When level 4 beds needed this reduced the capacity of the service and one patient needed the care of two nurses. The service cancelled patients' operations if no critical care beds were available. Every frontline clinical member of staff we spoke to told us they felt this was the main cause for patient cancellations. Clinical staff told us the trust would not consider 'ring fencing' critical care beds for cardiac surgery patients. The trust were clear that ring fencing beds was not a solution because of the need to respond to emergency and transplant work and clinical priority. However, the service did not have a plan to consider better arrangements to coordinate the use of critical care beds.
- There had been a decline in the number of routine elective cases performed, with cardiologists from within the trust choosing to refer routine patients to other local hospitals, with shorter waiting times and better patient outcomes. One consultant surgeon told us the Black Country had the highest heart disease rate in the country and it was disappointing that they were not always able to care for local patients. Another consultant told us with the current throughput of patients, targets set by the local CCG were not being met. The elective activity was 35 cases behind trajectory for the year and it was becoming a low volume service. West Midlands market share data for 2014/15 demonstrated that the trust along with another trust held the majority of the emergency activity (33%) but the least amount of elective activity (17%).
- Consultants told us that the increase in transplant surgery and complex cases referred from other hospitals was restricting their ability to offer timely access to elective (planned) surgery for local patients. There were tensions around the growth of the transplant service and its impact on other cardiac services.
- The increasing complexity of cardiac surgery was putting a strain on the service in critical care. Leads for this service told us more cardiac patients were on mechanical support, which put a strain on their staffing resources as patients needed greater levels of care and beds were not available.
- Since mid- December 2015, the trust had instigated multi-disciplinary meetings with a senior executive attendance to review complex surgery referrals, for example, for transplant and LVAD. The meetings did not involve the members of the current transplant and LVAD MDT. The intensivist made a final decision to accept the patient, to ensure this could be managed safely within capacity. Cardiologists we spoke with told us that this had caused delays in the treatment of patients that had been referred.
- There was an ongoing programme to refresh clinical services strategies at divisional level. The development of the LVAD programme was included in that. There was recognition that the trust position and clinicians views needed to be used to develop clear guidance on what can be accepted going forward.
- The trust had commissioned a wide ranging review of theatres and surgical pathways across the hospital, including cardiac surgery. The review had taken place in December 2015 and key findings were to be presented to key staff in January 2016. It was intended to extend the work to support the development of improvement in responsiveness across services.
- A step-down area on the ward was to take cardiac surgery patients at one-day post-surgery and free beds in critical care. Nurses had completed additional training to care for patients and would be supported by registrars or advanced nurse practitioners (ANPs). Some ANPs were completing training to enable them to

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support patients at night for a 24 /7 service. Policies and procedures were in draft form to identify patients suitable for this service and how they should be managed.

- Staff told us that the trust held outpatient clinics at local hospitals, to reduce the distance patients had to travel for their appointment. All tests and investigations both pre and post-surgery were completed on the same day as they saw the consultant, reducing the number of appointments they needed to attend. Two patients told us the outpatients clinics ran well.
- Exercise rehabilitation classes were available to encourage patients to remain well post-surgery.

Access and flow

- Cancellation data submitted by the trust showed that between December 2014 and November 2015, that the percentage of elective procedures cancelled on the day for non-clinical reasons was above the trust target of less than 0.8% for every month (Range 3% to 49%). The service cancelled 167 operations for non-clinical reasons, during the past year. For September, October and November 2015, the cancellation rate was 34%, 26% and 49% respectively.
- Staff told us that the service did not offer timely access to surgical treatment, in particular for routine elective surgery patients. They added patients were more unwell by the time they had surgery, resulting in a poorer outcome for the patient, during or shortly after surgery.
- Staff cited five main reasons for the poor access and flow, these were:-
 - Cancellations due to transplant patients taking priority.
 - Cancellations due to the early cut of time for the second operation in theatres.
 - Lack of dedicated critical care beds for cardiac patients.
 - Insufficient number of theatre staff.
 - Lack of suitably qualified staff in critical care to care for cardiac surgery patients.
- Staff told us clinical leads held weekly meetings about the high number of cancellations and data was collected but nothing had changed. There remained delays in cancelling patients, with no clear pathway as to who made this decision.
- Some patients had their surgery cancelled on more than one occasion. Theatre scheduling lists did not highlight

those patients who the hospital had previously cancelled or those who had the greatest clinical need and the service should not cancel. Cancellation data for April-November 2015 showed:

- 136 patients had surgery cancelled once
- 25 patients had surgery cancelled twice
- 14 patients had surgery cancelled three times
- 2 patients had surgery cancelled four times
- 1 patient had surgery cancelled five times
- Theatre staff commented that late starts in theatre affected the throughput of patients. Medical staff were not present at the agreed time to participate in the briefing about each case; this delayed the start of the theatre list. On some occasions, the surgeon was not scrubbed and ready to start surgery, despite the anaesthetist having put the patient to sleep. Data for November 2014-October 2015 showed that 68% of lists started late by more than 10 minutes. A further breakdown showed for the last three months (September-November 2015) that the length of delay ranged from 10 minutes to more than 60 minutes. Thirty two operations out of 104 operations (31%) were delayed by more than 60 minutes.
- The delayed start sometimes contributed to cancellation of the second case as the cut off time for theatre staff to send for this case was reached. Theatre and nursing staff on the ward commented that the cut off time for the patient to be in the anaesthetic room was very early, 12.30pm for one theatre and 1pm for the other. This did not follow practice in other departments where they had worked. Staff did not know why the times were different between the two theatres on-site. There was no standard operating procedure to support this cancellation process and ensure consistency across the service.
- Theatre staff told us the most complex cases was listed first, rather than the quickest. Due to the delayed start times, theatres reached the cut off time for the second operation, which the hospital then cancelled. They suggested the theatre manager could schedule the lists differently.
- On-call theatre staff told us they sometimes had to complete the routine elective surgery list, rather than being available for emergency surgery, as the list had overrun. They were not reporting this as an incident, to make managers aware. Equally overnight emergency lists sometimes overran which affected the availability of theatres the following day.

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- The electronic system used to predict length of procedures averaged the length of a procedure by surgeon, for 30 procedures of the exact same type. The average surgery time for each procedure showed significant differences for four out of five cases reviewed, compared to the actual time. For example, the system showed a coronary artery bypass graft procedure taking five hours 43 minutes, but this actually took four hours and five minutes. It was difficult for the manager to plan effective utilisation of time in theatres due to this difference. Trust data showed for the current financial year theatre utilisation for cardiac surgery was 83% against the trust target of 93% or above.
- One consultant had collected cancellation data for the patients on their waiting list; the hospital had cancelled 53 out of 84 operations for non-clinical reasons (September to December 2015). Another consultant had identified 109 cancellations on day of surgery for non-clinical reasons (11 August - 7 November 2015). They did not feel this was acceptable and there was a risk to patients, which the trust was not fully acknowledging. There was no formal process in place to share patients between consultants, i.e. 'pooling' to reduce waiting list times.
- Rebooking of cancelled patients affected the length of the waiting list for each consultant. Waiting list data for each consultant for October 2015 showed the wait in weeks ranged from 3 weeks for one consultant to 25 weeks and over for five consultants. Email evidence showed concerns raised by consultants to senior management about the length of wait and the failing of the service to look after patients appropriately.
- Theatre managers were considering increasing the operating hours for the service, to try to reduce the number of operations, which they had to cancel. The service needed to address staffing issues first. Theatre staff had suggested running one theatre for emergencies all the time, to enable elective lists to run as planned. Staff told us the trust had not considered this idea. The chief operating officer told us improvements in productivity were needed before making decisions about extending theatre hours or other additional resource for the cardiac surgery service. The external review of theatre use and surgical patient pathways was due to be presented and they hoped to commission additional support to develop and implement improvement plans.
- Senior critical care clinicians told us, in the week before the inspection, the hospital moved six non-cardiac patients from cardiac critical care beds to other areas to facilitate elective cardiac surgery patients. It was not always possible to move patients to free up critical care beds. Cardiac patients could not be cared for in other areas of critical care, due to lack of trained staff. The pooling of critical care beds since the move to the new hospital had fragmented the cardiac service.
- Critical care staff had noticed a reduction in the number of cardiac operations performed since the move to the new hospital and dedicated beds not being available. Previously consultants performed cardiac surgery six days per week, now it averaged about two days per week. Staff told us if the trust addressed issues in access to critical care beds then the service could see more patients. The executive team felt the issue was delays in discharging patients from critical care to the ward.
- An action plan to reduce cancellations, to align capacity and demand and ensure correct processes were in place had been developed July 2015, but was not having a significant impact. An 'automatic sends' procedure was instigated to avoid delays and cancellations to second cases. This required the patient to be sent to theatre even if the availability of a critical care bed was not confirmed at the time. This process is used in other trusts but we did not find it happening during the inspection. There was reluctance because staff would not accept that a critical care bed would be found.
- Data from the weekly cancellation meetings identified access to critical care beds as the main reason for patient cancellations. Either patients were not well enough for transfer to the ward or patients from other specialities occupied beds. The second cause was the hospital cancelling due to a more urgent case such as transplant or trauma.
- The average length of stay on critical care for heart and lung transplant patients was 22 and 24 days respectively. This increased length of stay and affected access to beds for elective patients.
- The ward manager visited critical care on a daily basis to talk to patients and staff when patients were ready for discharge to the ward. They hoped this would smooth the transition to the ward and build relationships with staff on critical care. Patients were sometimes anxious about being discharged from critical care as they had received one to one care from staff.

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- Some staff told us there were delays in the ward discharging patients home or transferring them to another hospital, but this was not the main cause for the problems with patient flow through the service. Medical patient outliers were admitted to the cardiac surgery ward, due to shortage of beds elsewhere in the hospital. This sometimes delayed critical care discharging cardiac surgery patients to the ward.
 - The service had overall met the 18 week outpatient target for referral to treatment time for the last 12 months. Data for April-November 2015 showed outpatient clinic utilisation averaged 65% against the trust target of 100%. This showed the service was not using all available appointments. We did not see evidence in minutes to show how the service or divisional were addressing this. Cardiologists told us they could not understand why there were delays in patients being seen, given the outpatient clinics were not full.
 - Appointment cancellations within six weeks of the appointment date (April-November 2015) for new patients were 2.5%. This was within the trust target of 3% or less. The cancellation of follow up appointments was outside this target. Although the exact figure was not known.
 - The percentage of new patients not attending their first appointment was 19% for April-November 2015. This was significantly higher than the trust target of 10% or less. It was not clear from talking to staff who took ownership of these concerns around outpatients.
 - Doctors from the transplant service referred patients to their local hospital for follow-up appointments, after the initial post-operative period, to reduce the distance they had to travel, as patients were not local. The hospital sent a discharge letter to the local service, to ensure all clinical information was available.
- had a learning disability. Staff told us and we saw in records, that individual care plans were developed, with the patient and their family, taking account of all their needs.
- Family members could stay on the ward in a side-room. This was particularly useful for patients and their families who were not local.
 - On the ward specialist equipment was available to support patients with a visual or hearing impairment. Also, staff identified patients post-surgery with confusion who may need additional support.
 - Staff told us family members were not used to provide translation. An interpreter was pre-booked or requested. Ward staff told us they generally arrived within an hour. If no interpreter was available staff used the language line service, which they said worked well and enabled this group of patients to be involved with decisions about their care.
 - All areas we visited were accessible for patients with mobility needs.
 - Staff described difficulties in accessing specialist support and advice, out of hours, for patients with mental health needs or those with substance misuse. Security were sometimes called as situations became stressful and difficult to manage.
 - On both the ward and critical care there were private rooms available should staff need to have difficult or upsetting conversations with family members and additional privacy was needed.

Learning from complaints and concerns

- Two patients were asked about the complaints process. Neither of them had been given any information on how to make a complaint as either an outpatient or inpatient. However, they had not found need to complain as their care had been excellent. They would speak with a member of staff or find complaints information on the hospital website if they needed to complain.
- Nurses told us that patients often complained verbally to them, when they told them their surgery was cancelled. Nurses tried to defuse the situation and advised patients to contact Patient Advice and Liaison Service (PALS).
- Divisional managers had oversight of all complaints received for their division, and the relevant team manager led investigations. Numbers and themes of complaints were discussed at divisional meetings. No

Meeting people's individual needs

- A nurse in critical care showed us how the location of theatres and critical care meant they moved patients from theatres along the main public corridor. They felt this did not support maintaining privacy for patients. There was no separate staff corridor they could use.
- Staff gave examples how they supported individual patients to ensure they met their needs. This included supporting parents to stay with their older child who

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performance data was included in the minutes, to show percentage compliance with the investigation or response times agreed with the complainant. However, staff told us and we saw that they logged the date an action was completed on the incident reporting system. This could then be reviewed against the planned date.

- Twenty-two complaints were received in the last 12 months for cardiac surgery services. The trust were still investigating four complaints. Of the 18 closed complaints, 3 had been upheld, 11 not upheld and 4 partially upheld. 11 (57%) of these closed complaints had been responded to within 25 working days. Nine complaints related to cancelled or delayed surgery and there was no specific learning or actions from these complaints. However, a reoccurring concern from all staff was the high number of cancellations and the lack of action from the trust.
- On the ward, the manager provided feedback from complaints, to the ward sisters. Senior staff shared key actions, with the rest of the team at handover meetings, such as storage of urine bottles in patient rooms.
- Senior staff shared compliments with the relevant staff member or team; we saw a number of letters that patients had sent to the chief executive. The ward and critical care displayed thank you cards received from patients and their families.

Are surgery services well-led?

By well led, we mean that the leadership, management and governance of the organisation assure the delivery of high quality person-centred care, supports learning and innovation, and promotes an open and fair culture.

We have inspected but not rated this service.

- There was a draft strategy for cardiac surgery services, it was not clear who had been consulted on its development. There was a lack of vision and direction for the service. Many staff took their strategic direction from the past based on how the service used to run six years ago.
- The service and trust had not acted with sufficient pace to address the concerns identified around mortality outliers and this had impacted on patients. The trust quality improvement programme had not started until September 2015 and there had only been a few meetings. Many staff were unaware of the QIP and some staff did not consider the programme was being appropriately led and did not have confidence that changes would result.
- Consultants had raised issues in 2014 and reported that previous attempts to highlight concerns around mortality rates had been ignored by the trust. Staff felt until the trust acknowledged there were issues within the service, nothing would change.
- Governance process were not robust. Clinical audit did not take place routinely to review the quality of the service. Risk registers lacked review dates for actions and there was minimal use of standard operating procedures to ensure safe practice and consistent standards of care for patients. Although key targets were reported on, little action was taken to address areas of concern, such as cancellation rates and access to beds in critical care.
- An external review of the service had not been completed, although this had been recommended in 2013 after an internal report.
- The cardiac service lacked clear leadership at service and divisional levels and this had resulted in delays in key decisions being made. This had impacted on patient care.
- Morale amongst staff, including consultants was low and there was a lack of impetus to make changes to the service.
- There were ingrained opposing positions. The trust leadership expected the service to work more effectively, the service was disjointed and wanted more leadership and support from the trust.
- The culture within the service was defensive and there was a lack of challenge over the quality and safety of the care provided.
- Staff described instances of bullying and a culture of blame, within theatres and critical care
- Staff vacancy rates were highest for theatres and there had been a notable increase in the vacancy rate for critical care during the last three months of 2015. There was not a clear action plan to investigate the reasons behind this to support staff retention.
- The views of patients were only gathered through the friends and family test and this was only done for patients who had had surgery and were discharged.
- Staff were not effectively engaged; many staff did not know about the mortality outlier concerns within the service. Many staff were aware of concerns within the

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service and had tried to raise these. They told us their concerns were not listened to. Some staff had not raised their concerns because of the culture of blame and low morale within the service.

- Staff felt they were not always kept informed of changes and developments in the service. They tried to raise concerns but the trust did not always respond.
- The service had seen a reduction in routine surgery cases, with a focus on more complex work. This was affecting the future sustainability of the service, as consultants were referring patients to other hospitals with shorter waiting times, lower cancellation rates and better patient outcomes.

However,

- Staff told us they felt supported by their immediate line managers
- The advanced nurse practitioner (ANP) programme was an innovative and positive approach to improve the care pathway for patients.

Vision and strategy for this service

- The service did not have a strategy or vision and its future sustainability had not been planned. The chief operating officer had recently asked all services to refresh clinical services strategies and away days were held at divisional level to support the process. A draft cardiothoracic surgery service strategy 2016/17 was submitted as evidence during the inspection. This was due to be shared with the chief executive advisory group in January 2016. It contained analysis of the current strengths, weaknesses, opportunities and threats (SWOT) to the service and how the strategy may be achieved. None of the clinical staff we spoke with or senior managers referred to this document or of having been consulted in respect of this document.
- The draft strategy identified concerns with operational capacity and service pressures but had not identified the quality and safety concerns identified during the inspection. The strategy SWOT analysis identified the mortality outlier was identified as a threat to the reputation and viability of the Trust as a provider of cardiac services. The SWOT analysis did not identify any quality and safety indicators.
- The majority of staff were taking their strategic direction from the past. Staff referred back to how the service was run prior to the reorganisation with the new hospital

(2010) in terms of strategy. Staff felt the move had fragmented the service and the focus and vision around a co-ordinated response to patient care had been lost. The main reasons for this were the loss of dedicated cardiac theatre and critical care teams and lack of dedicated cardiac beds in critical care.

- There were ingrained positions. Consultants told us they did not feel supported by the trust and therefore it was difficult to make changes, drive improvements and develop the service. The trust told us that the cardiac service was not working effectively together and were not being proactive to develop the change that was needed.
- Many staff had different considerations as to how to improve the service. There was not a unified view of the service priorities. Staff identified the following:
 - Bring surgery and anaesthesia under the same leadership
 - Standardise pre-operative assessment
 - Introduce multi-disciplinary decision over surgical planning.
 - Manage elective and emergency work separately, including in theatres
 - Ring fence ITU beds
 - Have specialist HDU beds
 - Reduce the level of complex work
 - Increase the throughput of conventional routine work
 - The majority of staff agreed the service would benefit from an external review to ensure the service strategy and priorities were based on what was genuinely needed in the best interest of patients. At the time of inspection, an external review had not been agreed by the trust.

Governance, risk management and quality measurement

- There were significant concerns around the governance processes, used to monitor quality, risk and performance. These included the trust response to the two sets of outlier data for in-hospital mortality.
- Mortality outlier data had been presented to the cardiac surgeons in May, July and November 2014. Individual consultants had raised concerns about quality and the need for a quality improvement programme (QIP) in 2014, in response to individual auditing of their outcomes. No action had been taken at this time.

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- The divisional and trust leadership team reported they were aware of the outcome data for the cardiac surgery service between March and April 2015 as a mortality outlier. The trust had challenged the statistical methodology that was applied in relation to the NICOR data and had identified potential factors for the result. This was reviewed and the statistical basis for the outlier was found to be robust.
- There had not been an immediate response by the trust to review the service and ensure patients were receiving safe and effective care and treatment in the light of the data. The quality improvement programme (QIP) was started in September 2015, and had only had a few steering group meetings. The next meeting of the steering group was planned on 23 December 2015. The trust told us that the QIP would resolve the service issues identified.
- Staff were disappointed at the pace of the QIP. Terms of reference had only recently been agreed, along with initial key actions identified in the cardiac surgery work programme. These included arranging an external review, reviewing the patient pathway and ensuring standardised protocols for post-operative care. Staff were concerned that not everyone recognised and accepted the issues which had been identified. Staff felt the trust assumed all issues would be resolved by the QIP. There were no actions listed to address issues around patient safety, staff morale, behaviour or the culture within the service, although the QIP steering group had acknowledged this needed to be considered. There were concerns from many staff that cardiac surgeons did not recognise all the concerns seen by others, for example, the cultural and behavioural issues. The meetings also did not have the multi-disciplinary input needed, for example, from the perfusion team. In our judgement the pace of change had been slow in response to the concerns raised about the service.
- There were no metrics attached to the QIP so performance to the QIP could be monitored. The trust did not provide assurance that patient safety would be ensured, whilst the QIP was implemented.
- An external review had been recommended from an internal performance review in 2013 and proposed to the executive team, but no review took place. Surgeons and cardiologists have since asked on a number of occasions for an external review, but told us this was not advocated by the trust leadership. They were advised to address local issues first. The QIP identified the need for reciprocal visits to other centres and an external review only once the trust had addressed local concerns.
- There was no evidence that the cardiac surgery service had an effective clinical audit programme to monitor standards of care. The audit programme that existed did not include evidence of clinical audit or action taken or learning. There were nurse led audits and medical audits which mainly focused on record keeping and operational times. These did not cover clinical audit, where standards of care are defined and the service monitors its practice against this standard. The service did not voluntarily participate in a national cardiac surgery benchmarking programme.
- Four sets of minutes of the monthly clinical quality monitoring group, which was attended by senior management staff, were reviewed. Mortality data and key clinical indicators such as readmissions to hospital after certain cardiac procedures, incidence of stroke after surgery, were presented. The minutes did not clearly identify an agreed response or actions to be taken by the group based on this data. There was no evidence of challenge around the data with regard to patient care.
- Risk assessments were not undertaken when necessary. For example, with the inability to cover the second on-call team for theatres and safe storage of harvested veins.
- The divisional and critical care risk register did not include the date a risk was added, nor the date for review of actions, to ensure monitoring of progress. The recorded risks, other than for the divisional risk register, did not align with concerns raised by staff during the inspection, such as staffing levels, skill mix and access to critical care beds. Risk registers were not to a standardised format across all areas of cardiac surgery, for consistency in quality and ease of use.
- The service leads identified access to beds in critical care and on the ward as a risk on the critical risk register. Mitigating actions were to escalate concerns to the site team to manage the throughput of patients
- There was no monitoring by the hospital of mortality rates (risk of death) for patients on the waiting list. The minutes from the quality improvement programme reported this as a concern. An investigation was taking place into a complaint about the death of a patient whilst on the waiting list.

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- Standard operating procedures (SOP) were not in place to help manage situations that arose, such as sending for or cancelling patients, or cut off times to send for the second case. This resulted in inconsistent practice and no one person taking ownership to manage the situation. This resulted in delays and a poor patient experience. We reviewed the SOP for transferring a patient from one operating theatre procedure list to another operating theatre procedure list. This was due for review in 2011. There was no assurance that the current procedure was still appropriate or safe.
- Although staff were encouraged to report incidents. There was evidence that incidents and near misses were not always appropriately reported or appropriately responded to when reported. Investigations were not always completed, nor learning and feedback provided to staff to improve quality and patient care. Nurses had reported the majority of incidents and, most of these were not clinical incidents. Morbidity and mortality review minutes from January 2015 to September 2015 did not identify underlying causes of concern for the services, no timelines were identified for actions to take in response to concerns or appropriate governance to sign off and follow up actions. Staff we spoke with identified individual consultant surgeons as defensive and themes were not being appropriately identified and managed across the cardiac surgery service.
- Members of the cardiac surgery speciality meeting monitored performance against key performance indicators, such as referral to treatment time and utilisation of theatre times. Minutes showed this group met in January 2015, prior to that is last meeting in 2013. The minutes did not identify why the group had not met for two years or how quality was monitored during that time.
- Multi-disciplinary team meetings to discuss patient outcomes and governance issues did not routinely involve all staff groups involved with the service. Teams tended to work in silos, which made it difficult to share learning. Some surgical staff felt unable to freely discuss cases at the monthly morbidity and mortality meetings as these were combined with the clinical governance meetings, for fear of judgment about their performance.
- A real-time daily governance meeting was to be introduced in January 2016, to review how the service

performed that day. Senior staff hoped this would enable more prompt action in response to incidents or concerns raised by staff and would provide a more open culture.

Leadership of service

- There was lack of clear effective clinical and operational leadership for the cardiac surgery service. Most staff we spoke with commented on the lack of leadership and service and divisional level. Two staff also told us the change in clinical leader every three years, meant changes were not always fully implemented.
- The cardiac surgeons did not provide day to day leadership of the service and there were institutionalised behaviour patterns and an unstructured approach to the operating service. For example, this was observed with variation in theatre attendance on time and availability in theatre when patients were being operated on, the lack of compliance with the Five Steps to Safer Surgery checklist, and the appropriate supervision of trainees.
- Staff told us that morale was low and this included consultant staff. Consultants told us they were not motivated to challenge issues about the service.
- Consultants felt unsupported. Although the service lacked direction and leadership, the trust were expecting them to be proactive. Some consultants felt the trust response to the outlier data was not correct and there were issues with patient survival rates. They had tried to bring these concerns to senior management before, but no changes had been made.
- Divisional leads felt the executive team were accessible and they felt well supported by them. They felt they had put effort into the QIP.
- Nursing staff told us that there was a lack of visibility of consultants on the cardiac ward, to provide day-to-day leadership and management of their patients.
- Staff in theatres and on the ward felt well supported by their immediate line manager. They were accessible and listened to concerns they raised, however, they felt there was a limited amount their manager could change due to the pressures they were under. Staff knew who to speak to if they needed to raise concerns to more senior staff. Staff said they felt comfortable to do this.

Culture within the service

- Medical staff told us there was low morale across all areas, due to a reduction in the volume of work overall,

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the culture within theatres and the current set-up of the critical care. This included the lack of beds for patients post cardiac surgery, current medical and nursing staffing numbers and skills mix. The atmosphere was tense, with medical staff feeling demotivated, as reasons for needing to develop and improve the service were not recognised by senior management.

- Staff identified a silo culture in the cardiac surgery service. Consultant staff did not meet regularly to discuss standards or outcomes or activity, or work together to plan or pool workload for the benefit of patients. Staff reported that concerns that they had raised about the service had not been responded to in a timely manner. These were concerns about leadership, morbidity data, consultant behaviour and the lack of appropriate protocols in ITU, and cancellation of operations. Many staff reported that their concerns were not listened to.
- Nursing staff reported a blame culture had developed in the ITU when incidents had happened. This had discouraged staff from reporting incidents.
- Staff told us the loss of experience nursing staff in critical care was a concern. Staff wanted to retain their skills and did want to be involved in the complex work. Many had transferred to work in other areas, for example the transplant team had their fourth member of staff from critical care. The lack of professional development and training, the constant negativity from the management of critical care and the trust, and agency nurses who do not have necessary skills, and the workload were causing staff to leave.
- Theatre staff described a bullying culture. They told us this was the cause for a number of staff leaving their departments and contributed to staff sickness. Some staff working in theatres had refused to work with particular consultant cardiac surgeons.
- Staff had reported the incidents of bullying, but these were not addressed effectively and made working relationships more strained. Staff told us they did not always feel that issues around poor performance were managed appropriately. Reasons for action or lack of action were not clear. Personal relationships made it hard for staff to raise concerns in some areas, as they felt a conflict of interests meant full consideration was not always given to their concerns.
- Staff told us 'there was a bad atmosphere'; 'it was soul destroying'; 'the department could not get any worse'.

Staff felt they could not do a good job, to ensure the best care for patients. They felt frustrated and demoralised. A member of staff told us they did not feel that patients were always the focus of the service.

Public engagement

- Ward staff were encouraged to ask patients or family members to participate in the Friends and Family test. Patients who had undergone surgery were included in the survey. Response rates had declined over the last 12 months, from 80% to 36%. However, this was still above the trust target of 20% response rate.
- No other evidence was seen to show how the views from patients were sought, such as through patients forums, or inviting patients who had complained to share their experience of care with the team.

Staff engagement

- Some nursing staff and medical staff, including consultant surgeons were not aware that the service was a mortality outlier or had only recently been told. Some were unaware of the QIP. This had not been shared with them at team meetings, or these meetings did not happen in their department. They did not feel communication was always effective from senior to frontline staff. The trust had not yet asked frontline staff to participate in the QIP, to ensure their views were sought and considered. There were plans to involve junior staff in the mapping of the patient care pathway.
- A senior manager told us that a review was being undertaken on reasons for nursing staff leaving critical care. However, frontline, management and executive staff told us about the stressful nature of this role, with issues around a blame culture and insufficient training for staff. It was not clear how a further review would help. There was no evidence of an action plan in response to concerns already raised.
- Evidence was analysed from 50 emails or letters submitted to the trust, over the last 12 months, with concerns raised by staff, including consultants, about cardiac surgery. Recurring themes from these were lack of beds in critical care, theatres staffing levels and cancellations. This data supported comments from staff that although they raised concerns, they were not acted on promptly.
- Vacancy data for November 2015 showed 12% vacancy rate for cardiac theatres, 18% vacancy rate for ITU and 1% vacancy rate for the ward. Between

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January-November 2015 the overall trend was for the highest vacancy rates to be in theatres. There had been a recent increase in vacancy rates on critical care between September-November 2015. Eight staff had left the service between January-December 2015. There was not a clear action plan to investigate the reasons behind this to support staff retention.

- Staff sickness rates over the same time in theatres ranged from 3%-7%, for ITU 2%-10% and 1%-8% for the ward.
- The staff Friends and Family test results, for December 2014-December 2015 showed that 64% of cardiac surgery staff would recommend the trust as a place to work; 93% would recommend it for care and treatment.

Innovation, improvement and sustainability

- Despite there being a steady decline, over the last 10 years, in more routine cardiac surgery cases, with an increase in complex and transplant surgery, plans were

only just being considered to limit the amount of complex work to ensure the overall sustainability of the cardiac surgery service. This was hindered by the lack of clear strategic direction and vision for the service, due to lack of clear leadership of the service.

- Theatre staff told us they wished to improve the quality of their service, but were unsure how to achieve this. It was difficult to improve cardiac services when not all teams were in the same division and managed by the same senior team. They hoped things might improve with the development of the QIP groups, which had staff members from both divisions. Many staff, however, considered that the quality improvement programme had yet to start and was being led by staff who were in themselves part of the problem rather than the solution.
- The advanced nurse practitioner (ANP) programme was innovative and had a positive impact on cardiac surgery service in supporting nursing and medical staff, and overseeing the care pathway for individual patients.

Outstanding practice and areas for improvement

Areas for improvement

Action the hospital MUST take to improve

We told the trust to immediately

- Commission, and undertake, an external review of cardiac surgery to identify the key actions that are necessary in response to the concerns identified.
- Provide information to CQC on patient outcomes to provide assurance around safety and quality pending the outcome of the external review and to take steps to ensure patient safety.

We will be taking further action on the following to ensure significant improvements are made.

The trust must ensure:

- Patient outcomes, based on SCTS data set, are regularly reviewed and monitored and action is taken in response to any patient safety concerns both at individual and service level.
- There is a positive reporting culture for reporting incidents across the whole service with learning as the key objective
- The impact of cancellations and patients waiting is monitored and actions taken to minimise the risk to patients arising from long waits and multiple cancelled operations.
- The Five Steps to Safer Surgery checklist is implemented appropriately and regular observational audit takes place to ensure this is happening.
- Staffing levels in theatres and critical care are reviewed to meet national guidance and ensure rotas clearly identify staff roles.
- Consultant surgeons are always available to provide supervision and immediate support whenever trainee cardiac surgeons operate to meet national guidance.
- Sufficient surgical and medical staff are available and have the appropriate skills, knowledge and expertise to care for patients on the ward and in critical care

- Medical staffing rotas (including on-call) mean staff are appropriately available and also not on-call for two departments at the same time.
- All staff complete safeguarding children and vulnerable adults training in line with trust targets.
- The storage room in theatres are appropriately maintained so all equipment and supplies can be accessed. Review the appropriateness of all items stored in this room to ensure staff and patient safety.
- Medicines are stored and managed safely
- Standardised care pathways are further developed in surgery and developed in critical care and these take account of national guidance.
- There are best practice based standard operating procedures and protocols for all areas within cardiac surgery services and these are reviewed routinely and kept in date
- All discussions with patients about their care are documented in the patients' medical record.
- There is regular attendance at MDT meetings by relevant staff
- Patients are nil by mouth for the minimum time necessary pre operatively.
- Nursing staff on critical care have the appropriate competence and skills to provide the required care and treatment to cardiac surgery patients, including the safe use of equipment.
- There are effective operational improvement plans to improve patient flow
- Cardiac surgery theatre use and productivity improves to meet the demands of the service and to minimise the risk to patients from long referral to treatment times (RTT).
- Cancellations of elective cardiac surgery for non-clinical reasons are significantly reduced

Outstanding practice and areas for improvement

- Patient on waiting list are prioritised appropriately and they receive treatment within national waiting times
- There is effective multidisciplinary working in the cardiac surgery service.
- A clear strategy and vision agreed by all across cardiac surgery services
- The pace of change within cardiac surgery services is significantly and demonstrably increased to ensure patient safety
- Appropriate clinical and operational leadership arrangements are in place to support improvement across the cardiac surgery service.
- Robust governance processes to monitor quality and to identify, assess and manage risk. This includes an effective clinical audit programme and national benchmarking. Key areas of concern are reportedly on regularly and action taken promptly.
- Action is taken to address issues of bullying of staff, promote staff welfare and manage poor performance appropriately.
- Action is taken to identify and take action on the reasons why staff are leaving the service and to develop retention plans.
- Staff concerns across the service are listened to and responded to in a timely manner.
- Patient consent is obtained appropriately at all times, including when their personal confidential information is displayed in public areas.

Action the hospital SHOULD take to improve

The trust should:

- Develop more effective ways to actively involve patients and their families or carers in the development of the service.

This section is primarily information for the provider

Enforcement actions

Action we have told the provider to take

The table below shows the fundamental standards that were not being met. The provider must send CQC a report that says what action they are going to take to meet these fundamental standards.

Regulated activity	Regulation
<p>Surgical procedures</p> <p>Treatment of disease, disorder or injury</p>	<p>Section 31 HSCA Urgent procedure for suspension, variation etc.</p> <p>We issued a section 31 Notice of decision to urgently impose conditions on the registered provider as we had reasonable cause to believe a person would or may be exposed to the risk of harm unless we did so. The notice of decision was in respect of cardiac surgery services at Queen Elizabeth Medical Centre, Birmingham.</p> <p>The Registered Provider must ensure that there is an external review of cardiac surgery services at the Queen Elizabeth Medical Centre. This review should be commissioned and the review should be completed and recommendations from the review laid out by the 26 February 2016. The full and revised terms of reference of the review should be sent to the Care Quality. The registered provider should submit reports to the Commission on the progress with the review findings and the actions taken to ensure the immediate safety of the service.</p> <p>The external review was requested through a letter of intent to be commissioned and to occur by 31 January 2016 and re-requested under s31 by 26 February 2016. The terms of reference were requested through a letter of intent by 6 January 2016 and requested under s31 by 20 January 2016.</p> <p>2. The Registered Provider must ensure that the Commission receives the following information on a weekly basis.</p>

Enforcement actions

- Indicators on morbidity and mortality that are identified within the SCTS core database, specifically on re-bleeding rates, all returns to theatre, length of operating time and length of time on bypass per procedure, length of time on clamps per procedure, blood use per patient procedure;
- Number of patients requiring re-exploration for bleeding or tamponade (which may not be the same as re-bleeding rates)
- Number of patients with >1litre bleeding 12 hours after surgery without return to theatre
- Sepsis rates
- Compliance with the World Health Organisation Five Steps to Safer Surgery checklist and evidence that the trust is assuring itself that this checklist has been followed as intended to ensure safe patient care.
- Number of operative procedures and cancellation rates and the reasons why operative procedures have been cancelled.
- The specific measures that are supported by audit information, of the steps taken to ensure the patient safety in theatre and area 'D' of the ITU, with reference to the concerns identified below.
- Progress reports on the external findings and implementation.

The data was requested by 30 December 2015 through a letter of intent and then re-requested under s31 by 20 January 2016.