Liverpool Heart and Chest Hospital NHS Foundation Trust

Liverpool Heart and Chest Hospital

Quality Report

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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 ●
Medical care	Outstanding ☆
Surgery	Good ●
Critical care	Good ●
End of life care	Good ●
Outpatients and diagnostic imaging	Good ●

Summary of findings

Letter from the Chief Inspector of Hospitals

Liverpool Heart and Chest Foundation Trust provide specialist services in cardiothoracic surgery, cardiology, respiratory medicine including adult cystic fibrosis and diagnostic imaging, both in the hospital and in the community, from locations in the Boroughs of Liverpool and Knowsley.

Liverpool Heart and Chest Hospital provides a full range of heart and chest services with the exception of organ transplantation. Throughout 2015/2016 these services included, procedures used to visualise the coronary arteries and treat narrowing's using balloons and stents (coronary angiography and intervention).

The implantation of pacemakers and other devices & treatments used to control and restore the normal rhythm of the heart (arrhythmia management). Surgical procedures used to bypass coronary arteries, replace the valves of the heart, and complex surgical correction of the major vessels in the chest (cardiac surgery).

Surgical procedures used to treat many major diseases affecting the lungs; these can include partial or complete lung removal.

Surgical procedures used to treat many diseases affecting the gullet and stomach (thoracic surgery). The trust also provided drug management of asthma, chronic obstructive pulmonary disease and cystic fibrosis (respiratory medicine). Community cardiovascular and chronic obstructive pulmonary services were provided for the residents of Knowsley.

We visited the hospital on 26- 29 April 2016. We also carried out an out-of-hours unannounced visit on 13 May 2016. During this inspection, the team inspected the following core services:

- Medical care services
- Surgery
- Critical care
- End of life Services
- Outpatients and diagnostic services
- Community Services for Adults

We rated Liverpool Heart and Chest Hospital as good with outstanding features. We have judged the service as 'good' for safe, effective, responsive and well led and outstanding for caring.

We rated the community service as outstanding overall.

Overall, we rated Liverpool Heart and Chest NHS Foundation Trust as good in safe and effective. We rated caring, responsive and well - led as outstanding, the trust was rated outstanding overall.

Our key findings were as follows:

Leadership of the trust

- The trust was led and managed by a stable, visible and accessible executive team. The senior team led the trust with a strong focus on service quality and positive patient experience.
- All staff we spoke with were familiar with the senior team and felt that managers listened to and acted upon matters of concern.
- All the staff we spoke highly of the senior team and board members. Staff gave examples of positive interactions and collaborative working between the board and staff in order to improve care, treatment and outcomes for patients.
- There was effective teamwork and clear leadership and communication in services at a local level.
- Managers and leaders were visible and approachable. Staff we spoke to felt supported by their managers and supported and encourage to raise concerns and ideas.

Summary of findings

- However, there were some concerns regarding the leadership styles in some isolated areas in the medical division. Some staff raised with us that the leadership of the service at a local level could be improved in terms of approach and attitude. A small number of staff told us that the local leadership would benefit from a more open, equitable and flexible approach to their management and development, as at times the leadership style could feel repressive.

Culture within the trust

- There was, in the main a very positive culture throughout the trust.
- Staff of all grades were committed to the continuous improvement to the quality of care and treatment delivered to patients.
- Staff felt comfortable and confident in respect of raising matters of concern. In addition staff felt that they could share ideas for improvement and innovation and that managers and the senior team would support the implementation.
- There was a range of reward and recognition schemes that were valued by staff. Staff were encouraged to be proud of their service and celebrate their achievements.
- However, there were also some (historical) concerns regarding the culture in the Critical Care Service and some additional concerns about the culture in parts of the medical services. The trust was sighted on the issues in both areas and had plans in place to develop leaders and improve the culture in both areas.
- Overall, we found that staff were proud of the services they delivered and proud of the trust.

Governance and risk management

- The governance arrangements were centred on 3 divisions, Medicine, Surgery and Clinical services. Each division was managed by a triumvirate of an Associated Medical Director, Divisional head of Operations and a head of nursing. The triumvirates reported to the board through a well-developed committee structure that included, people, quality, integrated performance, audit, charitable funds and Nomination and remuneration for Executives.

- Mechanisms were in place to ensure that committees were led and represented appropriately, to ensure that performance was challenged and understood. There was good challenge and scrutiny by non-executive directors who were well sighted on both risk and quality.

- The Board Assurance Framework (BAF) was suitably aligned to strategic objectives and was linked appropriately to divisional risk registers that were regularly reviewed.
- We noted that the trust did have an over-all trust risk register and that processes were in place to ensure that both operational and strategic risk and performance issues were reported and mitigated though monthly management meetings chaired by the Chief Executive.
- There were divisional governance meetings where performance, risks and learning was discussed and shared. Staff had access to robust data to support good performance which included thematic reviews and correlation of data to promote early identification of poor performance that supported remedial action planning.
- Locally staff were aware of the risks and challenges to both their service and the wider trust.
- Staff understood the risks and the actions in place to mitigate them.
- The trust had a data quality strategy in place aimed at improving and maintain good data quality to underpin planning and performance management.

Mortality rates

- Mortality and morbidity reviews were held in accordance with trust policies and were underpinned by robust and well understood procedures. All cases were reviewed and appropriate changes made to help to promote the safety of patients and prevent avoidable deaths. Key learning Information was cascaded to staff appropriately. Monitoring arrangements were in place at board level to ensure that opportunities for learning and improvement were implemented.

Summary of findings

- The Summary Hospital-level Mortality Indicator (SHMI) is a set of data indicators, which is used to measure mortality outcomes at trust level across the NHS in England using a standard and transparent methodology. Specialist acute Trusts do not calculate their mortality rates using the summary hospital-level mortality indicator (SHMI).Due to the specialist nature of it's services, Liverpool Heart & Chest Hospital has implemented the risk prediction equations published by the British Cardiac Interventionist Society and the Society of Cardiothoracic Surgery. To derive estimates of mortality expected frost the case mix of patients being treated. Measures of observed and expected mortality are compared each month as part of its performance management arrangements and reported to the Trusts Clinical Patient Family Experience Committee. Between January and December 2015, mortality rates within the trust had remained at or below the expected levels.

Safeguarding

- Accessible policies and procedures explained the processes for safeguarding vulnerable adults and children.

- Safeguarding practice was supported by mandatory training. Training statistics provided by the trust showed that 91% of staff had completed level 1 safeguarding adult training and 76% had completed level 2 training. This was below the trust target of 95%

- The trust target for safeguarding children was 95% and compliance rates for safeguarding children level 1 was 92% and level 2 was 88%. Again below the trusts target of 95%.

- A trust safeguarding team advised on adult safeguarding concerns. The team included a lead nurse for patient and family centred care and safeguarding. Support was also provided for patients with additional and/or complex needs.

- The lead nurse worked with patients and families to develop plans of care in order to fully meet the patients' individual needs. This included support for people living with dementia, a learning disability, autism spectrum conditions, patients with physical disabilities and patients with mental health and capacity issues.

Equality and Diversity

- The trust had developed an Equality and Inclusion Strategy. The aim the strategy was to support the further development of the trusts approaches to promoting equality, managing diversity and ensuring that it was effective and efficient in taking a human rights based approach as a health care provider and an employer. Staff and patient representatives had participated in the strategy development.

- The trust has developed high level aims and categorised the activity planned under four clear outcomes aligned with the refreshed Equality Delivery System (EDS2) Outcomes:

- Better Health Outcomes
- Improved Patient Access
- Empowered Engagement & Well Supported Staff
- Inclusive Leadership
- We analysed data from the NHS Staff survey regarding questions relating to the Workforce Race Equality Standard (WRES). The results for the trust were generally positive in most areas.

Nurse Staffing

- There were processes in place to ensure ward staffing levels were monitored on a daily basis. Senior nurses and matrons met each week to discuss nurse staffing levels across services to ensure that that there were sufficient numbers of staff to meet patient needs.

- Staffing on a day to day basis was reviewed as part of the trust bed management strategy. Shortfalls were subject to management action and risk mitigation.

- Staffing levels were maintained by staff regularly working extra shifts and with the use of bank or agency staff

- An induction process was in place for new and temporary staff to familiarise them with the trust's operational policies and procedures.

Summary of findings

- Nursing handovers were structured and information handed over to the incoming staff included allergies, mobility of patients, incidents and expected date of discharge. Each member of staff on the ward had access to a copy of the handover sheet at the beginning of each shift.
- However, nurse staffing levels remained a challenge, particularly in critical care and surgery. Nurse staffing was identified on both operational and corporate risk registers. At the time of this inspection there were 50 nursing staff vacancies across the trust and additional posts had been made available in order to support the increased requirements across the hospital.

Medical Staffing

- At the time of our inspection in surgical services there were appropriate numbers of medical staff to meet the needs of patients.
- Health and Social Care Information Centres (HSCIC) statistical data from September 2004 to September 2014 showed that the proportion of consultants was 51% compared to the England average of 41%; middle career doctors were 4% compared to the England average of 11%. The registrar group was 39% compared to an England average of 37%, whilst the proportion of junior doctors at the trust was 6% compared to an England average of 12%.
- Trust staffing data dated December 2015 confirmed planned medical staff – consultant or equivalent grade as 74.00 and of this 73.89 whole time equivalent (wte) consultant staff were employed. In addition an additional two consultants were due to join the trust in July 2016.
- In medical services there was an on call rota which ensured there was a consultant available 24 hours a day seven days a week for advice and support. In surgical services, there is an identified 'consultant of the day', who reviews patients on surgical wards.
- The percentage of consultants working in medical services trust wide was 42% which was higher (better) than the England average of 34%. The percentage of registrars was 46% which was above (better) than the England average of 39%. The percentage of junior doctors was 12% which was lower (worse) than the England average of 22%. There were no middle grade levels compared with the England average of 6%.
- In December 2015 there were 3.5 whole time equivalent medical staff vacancies in medical services.
- The trust had an ongoing medical recruitment programme.

Cleanliness and infection control

- Clinical areas at the point of care were visibly clean, trust had infection prevention, and control policies in place that were accessible to staff and staff were knowledgeable about their role in controlling and preventing infection.

- Staff followed good practice guidance in relation to the control and prevention of infection in accordance with established trust policies and procedures.
- There was an ample supply of personal protective equipment available such as aprons and gloves that were accessible for staff and was used appropriately.
- There were established audit programmes in place related to the prevention of infection, which included hand hygiene, infections within a central line (a long, thin, flexible tube used to give medicines, fluids, nutrients, or blood products) and methicillin-resistant Staphylococcus Aureus (MRSA). Compliance rates were high and where practice shortfalls were identified there was action planning to secure improvement.
- There were no cases of trust reported MRSA reported between August 2014 and August 2015. There were three cases of Clostridium difficile and 12 cases of Methicillin-susceptible staphylococcus aureus (MSSA) reported over the same period.

Nutrition and Hydration

Summary of findings

- As part of CQC inpatient national survey, between August 2015 and January 2016, a questionnaire was sent to 1250 recent inpatients at each at Liverpool Heart and Chest Hospital NHS Foundation Trust. Responses were received from 819 patients; these responses rated the Hospital as better when compared with other trusts in relation to both the quality of food and the assistance given to support people to eat.
- The trust score the same as other trusts in relation to the choice of food being offered to patients
- We found that that there was a comprehensive selection of meals available was available for patients. Meals were also available for patients with different dietary, cultural and religious requirements; for example, halal meals.
- When patients had a poor intake of food due to their condition, medical staff prescribed appropriate dietary supplements. There were also dedicated chefs on the cystic fibrosis wards to ensure that patients had the correct diet when they required it.
- Support for patients who required assistance with eating and drinking was given in a discreet and sensitive way.
- Patient led assessments of food and hydration (PLACE) in 2015 showed a standard of 99%. This was higher (better) than the England average of 89%.

We saw several areas of outstanding practice including:

- Medical services developed the lateral atrial appendage occlusion service (LAAO) which has the highest activity rates in the country and implemented the first leadless pacemaker. LAAO is a treatment to reduce the risk of atrial blood clots entering the bloodstream and causing a stroke.
- A number of staff received external awards for innovative projects; for example, for continuous glucose monitoring and the cardioversion service.
- 'Back to the Future' is a multi-disciplinary team model of working that places the patient at the centre of the decision making and builds a trans disciplinary working team (TDT). Pivotal to the delivery of this model of care were the concepts of person-centred coordinated care from the perspective of the individual and reablement using trans disciplinary working.
- A new role to be developed as part of the pilot is the 'Total Care Practitioner.' This non-registered member of the care team will play an essential role to support the patient to achieve their agreed goals through facilitation, reablement and delivery of delegated therapy and nursing interventions.
- A chest x-ray competency tool was developed for advanced practitioners and this had been shared both nationally and in Europe. The nurse led chest drain clinic was shortlisted by the Nursing Times Awards to enable patients to be discharged home with a chest drain connected to a flutter bag. An article was also published within the Nursing times. A standardised discharge letter was developed for district nurses with all relevant information. This enabled patients to be cared for at home without frequent trips to the hospital to aspirate fluid, therefore hopefully making the end of life more comfortable and dignified for patients and families.
- The trust had developed the 'Liverpool Lounge Suit' that patients could wear during procedures, the suit replaced the traditional hospital gown and supported the patients dignity as the design of the suit meant that only the minimum of exposure was required to carry out the procedure and the patients dignity maintained.

However, there were also areas of practice where the trust should make improvements.

The trust should:

Trust Wide

- Improve adult and children's safe guarding training compliance rates in line with internally set targets.

In Critical Care Services;

- The management team should ensure that the policy for managing delirium is updated and that a policy for administering medication in end of life care should be implemented to ensure that up to date evidence based practice is followed.

Summary of findings

In Surgery;

- The trust should ensure that staff attendance at mandatory and safeguarding training is improved. The trust should ensure medical staff attendance at safeguarding training sessions is documented to determine compliance.
- The trust should ensure that medical trainees can access human factors training, simulation training and formalise cardiac training opportunities.
- The trust should continue to improve WHO checklist completion by staff.

In Outpatients and Diagnostic Imaging;

- The trust should take steps to ensure that resuscitation equipment is checked in line with trust policy, expiration dates are monitored and all emergency equipment is available for use.

In End of Life services;

- The trust should ensure that consultant cover is increased to meet the national standard required.
- The trust should ensure the implementation of the planned End of Life training package. As this should ensure staff have access to specific training relating to the effective delivery of high quality care End of Life Care to all.

Professor Sir Mike Richards
Chief Inspector of Hospitals

Summary of findings

Our judgements about each of the main services

Service	Rating	Why have we given this rating?

Medical care — Outstanding ☆

We rated medical services at Liverpool Heart and Chest Hospital as outstanding in the caring, responsive and well -led domain. We rated the safe and effective domains as good. This was because :

Services provided by the trust reflected people's individual needs and preferences and continuity of care for patients was central for staff. There was a proactive approach to understanding the needs of different groups of people including vulnerable patients and reasonable adjustments were made.

Facilities and premises were appropriate for the services delivered and were well resourced, especially on the holly unit and cherry ward. When there were delayed discharges staff worked with partner organisations to ensure these were kept to a minimum and the majority of the time under 24 hours.

Staffing levels on all the wards were good. Staff vacancies were noted on the risk register and actions had been identified to mitigate this risk. There was a reliance on temporary staffing on some of the wards but there was a buddy system in place to make sure they were well supported.

Care was provided in line with national best practice guidelines and medical services participated in the majority of clinical audits where they were eligible to take part. For example the heart failure audit.

Pain was managed effectively and pain scores were being completed. Staff had access to information they needed to support patients.

Local policies and procedures were followed in relation to the care of patients. The service actively engaged with research networks and recruited well to national research studies. For example the assessment of tapping techniques in cystic fibrosis patients. These techniques are used to clear the airways in patients.

Patients told us staff were caring, kind and respected their wishes. We saw staff interactions with people were person-centred, and people we spoke with during the inspection were complimentary about the staff who cared for them.

Patients and their relatives were supported with their emotional needs and there were services in place to

Summary of findings

provide support for patients and relatives. Patients could be referred to external counselling services if they required ongoing support. The friends and family test was positive for the medical wards.

Patients received compassionate care and their dignity and respect were maintained. Staff were highly motivated to offer support to patients which was kind and caring and they were willing to go the extra mile.

The facilities and premises were appropriate for the services that were planned and delivered. There were excellent facilities in bedrooms, the majority of which had en-suite facilities. In areas where facilities were below the trust's high standards, such as birch ward and maple ward, medical services had plans in place to improve these.

There was a specialist nurse who was the clinical lead for dementia. The nurse provided support for staff and a central point for queries. The trust also had access to psychiatric services that saw and assessed patients with a cognitive impairment, if required.

Each ward had an activity box and reminiscence files to provide stimulation and assist to orientate patients who had a cognitive impairment to time and place.

Surgery — Good

We rated surgical services at Liverpool Heart and Chest Hospital as 'Good' because :

Care was provided in line with NICE CG50. Patient's risks were assessed to determine their fitness for surgery. The service had protocols and guidelines in place to assess and monitor patient risk in real time. Consent processes were robust and documentation associated with these processes was adapted to the individual patient's needs and understanding.

Patients received evidenced based care, treatment and patient outcomes had improved. The 'Patient-Led Assessments of the Care Environment' assessment in 2015 rated the trust higher than the national average on privacy, dignity & wellbeing, the dementia friendly environment, facilities and food.

Service planning and delivery considered patients' needs, which resulted in changes to the service and how it was delivered, which benefited the patient.

Support was in place for those patients and their families who had either learning disabilities or dementia type conditions. The trust had identified a lead nurse for dementia who was also a 'Dementia Friends Champion.'

Summary of findings

The 'Home for Lunch' initiative was implemented trust wide to improve the timeliness of in-patient discharge from hospital by ensuring everything was in place for a safe and timely return to their place of discharge by 12 mid-day. Patients who met its criteria used the discharge lounge which opened in November 2015. Clinical equipment was serviced. Daily monitoring of resuscitation equipment had taken place. We observed that flooring in the theatre corridors was damaged and had been taped. Staff said that the entire theatre flooring was due for replacement under the planned maintenance program during 2016.

Critical care	Good ●	We rated critical care services at Liverpool Heart and Chest Hospital as 'Good' because :

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Summary of findings

End of life care

Good ●

We rated End of Life Care at Liverpool Heart and Chest Hospital as 'Good' because :

The specialist palliative care team [SPCT] were competent, knowledgeable and responded to patients and their loved ones needs.

The team had completed mandatory training and had received annual appraisals.

They knew how to report incidents and raise concerns although not all incidents relating to end of life that were reported across the wards were escalated to the team which meant they didn't have an overview of the service or improvements required.

There was an end of life strategy in place that had been shared across services at the hospital however not all staff on the wards were aware of the vision for end of life services.

There were processes in place to monitor quality of the service and complaints were responded to appropriately.

Palliative and End of Life care was provided on all wards at Liverpool Heart and Chest hospital and all staff were caring and committed to meeting patients' needs. In the previous twelve months, 174 patients had died in the hospital. During this time there were 255 in patient referrals made to the specialist palliative care team although there were occasions were referrals to the team were late due to the sudden deterioration of patients.

DNA CPR and ceilings of care, which involved the cessation of all invasive treatments and non-essential medication, were clearly documented and visible for staff to see.

Patients were included in decisions about their care and treatment and we saw evidence of discussion with patients where relevant and families regarding decisions made and reasons why.

The SPCT worked effectively within their team but also with as part of multi-disciplinary teams, to deliver effective and timely care to patients.

There was a multidisciplinary approach from chaplaincy services, patient services, and the SPCT and ward staff in supporting both patients and their loved ones. All staff we spoke to felt it was an important part of their role to care for patients and families and we save evidence of staff going above and beyond to ensure patient's needs were met.

Summary of findings

The trusts bereavement team consist of the End of Life Lead and two named bereavement staff. Families we spoke with said they felt supported.

| **Outpatients and diagnostic imaging** | Good | 🟢 | We rated outpatients and diagnostic imaging services at Liverpool Heart and Chest Hospital as good because : Policies and procedures were in place for the prevention and control of infection and to keep people safe. Care provided was evidence based and followed national guidance. Staff worked together in a multi-disciplinary environment to meet patients' needs and a range of specialist nurses were available. Staff responded and managed deteriorating patients appropriately and records and observations were updated regularly. There was an outreach team that followed up patients after being discharged. Services were delivered by caring, committed and compassionate staff and care was planned that took account of patients' wishes. The trust met national referral to treatment standards for incomplete pathways between June 2015 and February 2016 with the exception of December 2015. The trust consistently met the targets for cancer patients to be seen by a specialist within two weeks of urgent GP referral and to receive first definitive treatment within 31 days of diagnosis. Quality and performance were monitored and there was evidence of continuous improvement and innovation |

Liverpool Heart and Chest Hospital

Detailed findings

Services we looked at

Medical care; Surgery; Critical care; End of life care; Outpatients and diagnostic imaging

Detailed findings

Contents

Background to Liverpool Heart and Chest Hospital

Liverpool NHS Foundation Trust serves a population of approximately 2.8 million people in and around unitary authorities of Merseyside, Cheshire and the Isle of Man. The Liverpool Heart and Chest Hospital site is close to the junction of the M62 motorway and, for elective services in particular is estimated to have a catchment population of 2.8 million, compared with a resident Merseyside population of 1,391,113.

Merseyside is a major urban region, in which the largest age group is 16-44 (37.9%). The distribution of age groups is similar to the England average. All five Merseyside unitary authorities scored worse than the England averages across a range of indicators in the 2015 Area Health Profiles. Liverpool Unitary Authority scored significantly worse than the England average for 21 of the 30 scored indicators. Knowsley scored worse than average for 19, Sefton for 15, St Helens for 17 and Wirral 12. No area scored above the England average for more than six indicators. Liverpool and Knowsley both scored particularly badly compared to the England averages for

child poverty, smoking related deaths and cancer mortality among under-75s. St Helens was particularly bad for alcohol specific hospital stays in under-18s and the percentage of adults who were physically active. Rates of statutory homelessness are similar to the England average and the incidence of violent crime is better than the England average. Long term unemployment, drug misuse and early deaths from cardiovascular diseases are worse than the England average and early deaths from cancer similar than England average.

In the 2015 Indices of Multiple Deprivation, Liverpool, Knowsley, St Helens and Wirral Unitary Authorities all

ranked in the worst quintile for deprivation. Sefton was the only one of the five Merseyside unitary authorities which didn't rank in the worst quintile. It ranked in the second-to-worst quintile.

We inspected this trust as part of our scheduled programme of comprehensive Inspections.

Our inspection team

Our inspection team was led by:

Chair: Nicholas Bishop

Head of Hospital Inspections: Ann Ford, Care Quality Commission

The team included CQC inspectors and a variety of specialists:

The team included one inspection manager, six CQC inspectors, an inspection planner, a senior analyst and a variety of specialists including : a non-executive board member, a medical director, a director of nursing, a senior manager, a governance lead, a consultant physician, an accident acritical nurse specialist, an

Detailed findings

intensive care consultant, an intensive care advanced nurse, and consultant in palliative care, a palliative care nurse, outpatients nurse, a consultant cardiothoracic surgeon, a junior doctor and a student nurse.

How we carried out this inspection

To get to the heart of patients' experiences 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?

Before visiting the trust, we reviewed a range of information we held about Liverpool Heart and Chest NHS Foundation Trust

and asked other organisations to share what they knew about it. These included the Clinical commissioning

Groups, NHS England, Health Education England, the General Medical Council, the Royal Colleges and the local Health watch.

We held an engagement event for people who had experienced care at Liverpool Heart and Chest NHS Foundation Trust on the 14 April 2016 in The Liverpool Heart and Chest Hospital. The event was designed to take into account people's views about care and treatment received at the hospital and community services. Some people also shared their experiences with us by email and telephone. The announced inspection of Liverpool Heart and Chest NHS Foundation Trust took place on 26 – 29 April 2016.

The inspection team inspected the following core services at Liverpool Heart and Chest NHS Foundation Trust :

• Medical care (including older people's care)

• Intensive/critical care

• Outpatients and Diagnostic Imaging

• End of life care

• Community services

As part of the inspection, we held focus groups and drop in sessions with a range of staff in the hospital including nurses, trainee doctors, consultants, student nurses, administrative and clerical staff, physiotherapists, occupational therapists, pharmacists, domestic staff and porters. We also spoke with staff individually as requested. We talked with patients and staff from all the ward areas and outpatients services. We observed how people were being cared for, talked with carers and/or family members, and reviewed patients' records of personal care and treatment.

We undertook an unannounced inspection between 12pm and 5pm on 13 May 2016 at Liverpool Heart and Chest hospital. As part of the unannounced inspection, we looked at post-operative critical care and medical care wards. We would like to thank all staff, patients, carers and other stakeholders for sharing their balanced views and experiences of the quality of care and treatment at Liverpool Heart and Chest Hospital.

Facts and data about Liverpool Heart and Chest Hospital

The trust provides;

• 220 Beds in total

• 186 General and acute

• 18 Critical care

The Trust Employs 1,427 staff:

• 137 medical

• 489 nursing

• 801 other

Detailed findings

Between January and December 2015, there were 7,797 inpatient admissions and 73,015 outpatient attendances. There were 43,301 attendances at the trust's community clinics between February 2015 and January 2016.

Our ratings for this hospital

Our ratings for this hospital are:

	Safe	Effective	Caring	Responsive	Well-led	Overall
Medical care	Good	Good	☆ Outstanding	☆ Outstanding	☆ Outstanding	☆ Outstanding
Surgery	Good	Good	Good	Good	Good	Good
Critical care	Good	Good	Good	Requires improvement	Good	Good
End of life care	Good	Good	☆ Outstanding	Good	Good	Good
Outpatients and diagnostic imaging	Good	N/A	Good	Good	Good	Good
Overall	Good	Good	☆ Outstanding	Good	Good	Good

Medical care

Safe	**Good**	🟢
Effective	**Good**	🟢
Caring	**Outstanding**	☆
Responsive	**Outstanding**	☆
Well-led	**Outstanding**	☆
Overall	**Outstanding**	☆

Information about the service

The medical care service at the hospital provides care and treatment for cardiology, respiratory medicine and adult cystic fibrosis. The trust serves a population size of approximately of 2.8 million people across Merseyside, Cheshire, North Wales and the Isle of Man. It also receives referrals from outside these areas for highly specialised services. There are 87 medical beds at the hospital and a total of 212 whole time equivalent members of staff.

We visited Liverpool Heart and Chest Hospital as part of our announced inspection on 25 April to 29 April 2016.

During the inspection, we visited birch ward, cherry ward, maple suite, holly unit (day unit), coronary care unit, catheter laboratories and the discharge lounge.

We reviewed the environment and staffing levels and looked at 23 care records and 13 prescription records. We spoke with seven family members, 12 patients and 41 staff of different grades including nurses, doctors, ward managers, physiotherapists, diabetic nurse, catering staff, a domestic, a pharmacy technician, student nurses and the senior managers who were responsible for medical services.

We received comments from people who contacted us to tell us about their experience at the trust. We reviewed performance information about the trust. We observed how care and treatment was provided.

Summary of findings

We rated medical services at Liverpool Heart and Chest Hospital as outstanding in the caring, responsive and well-led domain. We rated the safe and effective domains as good.

- Feedback from patients and those close to them was consistently positive about the way staff treated them. Staff went the extra mile to provide care and support. There was a strong person-centred approach to providing care. Relationships between people who use services and staff were caring, supportive and promoted people's dignity.

- Services provided by the trust reflected people's individual needs and preferences and continuity of care for patients was central for staff. There was a proactive approach to understanding the needs of different groups of people including vulnerable patients and reasonable adjustments were made.

- The hospital had implemented a number of schemes to help meet people's individual needs, such as the forget-me-not sticker for people living with dementia or a cognitive impairment and a red symbol to indicate that a patient was frail or elderly. This helped alert staff to people's needs.

- Facilities and premises were appropriate for the services delivered and were well resourced, especially on the holly unit and cherry ward. When

Medical care

there were delayed discharges staff worked with partner organisations to ensure these were kept to a minimum and the majority of the time under 24 hours.

- Incidents were reported by staff through effective systems. Lessons were learnt and investigation findings and improvements made were fed back to staff.There were systems in place to keep people safe and staff were aware of how to ensure patients' were safeguarded from abuse. The hospital was clean and staff followed good hygiene practices.

- Staffing levels were good and were reviewed regularly to ensure that there were enough staff with the correct skills to keep people safe.Any staff shortages were responded to and there was a buddy system in place to ensure temporary staff were supported.

- Best practice guidance in relation to care and treatment was usually followed and medical services participated in national and local audits. Action plans were in place if standards were not being met.

- People were supported to raise a concern or a complaint. Lessons were learnt and improvements made from complaint investigations. Medical services captured views of people who used the services with changes made following feedback. The friends and family test showed that people would recommend the hospital to friends or a relative.

- All staff knew the trust vision and behavioural framework. They felt supported and said morale was good.All staff were committed to delivering good, compassionate care and were motivated to work at the hospital.

However:

- There were governance structures in place which included a risk register but some actions on the register had not been recorded in the correct section.

Are medical care services safe?

Good ●

We rated medical services as 'Good' for Safe because:

- Staffing levels on all the wards were good. Staff vacancies were noted on the risk register and actions had been identified to mitigate this risk. There was a reliance on temporary staffing on some of the wards but there was a buddy system in place to make sure they were well supported.
- Incidents were reported by staff through effective systems and staff were aware of lessons learnt and that improvements had been made from investigations. There were systems and standard operating procedures in place to keep people safe and staff were aware of how to ensure patients were safeguarded from abuse.
- There were systems in place to manage the safe administration and prescribing of medication. Although audits had been undertaken it was unclear if omissions of medication were reviewed on a daily basis. None of the medication errors in medical services had been recorded as high risk.
- Medication requiring cool storage was appropriately stored in fridges and temperature checks were always completed. Controlled drug checks were always completed on the wards and there was good stock control.
- There were effective systems in place to ensure patient safety was monitored and maintained which included signs of deteriorating health and medical emergencies.
- The hospital was clean and staff followed good hygiene guidance. There was good monitoring of infections and we observed that cleaning schedules were completed as required.

However,

- Staff attended mandatory training courses but compliance rates were below the trust target.

- Cleaning chemicals had been left out in an unlocked room on maple suite and the dirty utility room was left unlocked which presented a risk to people.

Medical care

- Leading onto the main corridor there was a store room that was unlocked. This posed a risk as it contained essential fluids and equipment, and there was direct access to an area where procedures were being undertaken.

Incidents

- Staff were familiar with and encouraged to use the trust's policy and procedures for reporting incidents. Incidents were reported through the trust's electronic reporting system. We spoke with a range of staff across the services that were all aware of how to report incidents. However, there were concerns that there was also a paper system in place which staff could use. Although staff said this information was uploaded onto the electronic system there was a risk this might not happen. We saw three out of four paper incident reports on maple ward which did not have the manager's signature and it was unclear if these had been reviewed by the manager.
- A root cause analysis tool was used to investigate serious incidents. We saw that an action plan was put in place where required to reduce the risk of the incident happening again. Action plans included evidence of feedback and actions for learning which were shared with clinical teams and the wider trust.
- There had been no never events reported in medical services (Never events are serious, wholly preventable incidents that should not occur if the available preventative measures had been implemented).
- Between January 2015 and December 2015 medical services reported 395 incidents. Of these, 209 were categorised as a near miss. This meant the incidents resulted in low or no harm to patients. The main cause for incidents was missing or faulty medical devices and equipment followed by documentation incidents.
- Between March 2015 and February 2016 there were no serious incidents reported throughout medical services at the hospital.
- In the 2015 staff survey 92% of staff said they had reported an incident that could have harmed patient or staff. This was above the trust's overall incident reporting percentage which indicated a good reporting culture in medical services.
- Senior staff told us general feedback on patient safety information was discussed at ward staff meetings or in staff huddles. On the wards we visited senior staff met with ward staff to look at lessons learnt from incidents.

- Staff told us they received feedback from incidents they had reported via email. The outcome of investigations was also received from senior staff. Staff were able to describe a change made following an incident. For example, an electronic safety checklist was introduced in the catheter labs to improve the safety of procedures.
- Grand rounds assisted the learning from incidents and staff were able to give us an example when this had happened. Grand rounds are formal meetings for doctors to discuss clinical issues and learning.
- Information about incidents was discussed as part of the divisional governance committee meetings. This included learning from incidents in other divisions.
- Staff also received learning from incidents in a quarterly safety bulletin. For example, medical and surgical colleagues working together to ensure day cases were listed in the correct order so that patients were not fasting unnecessarily.
- Staff we spoke to were aware of the H.A.L.T. process developed in the trust. This aimed to empower staff to stop any procedures if they thought there was a safety issue for patients.
- Mortality and morbidity meetings were held every month and themes and trends were discussed. Learning and actions had been identified but it was unclear if the timeframe for actions or the person responsible had been identified. This made it difficult to track progress. These were also discussed and reviewed at the divisional governance committee meeting were learning was shared.
- Senior staff were aware of their responsibilities relating to Duty of Candour legislation and were able to give us examples of when it had been implemented. The trust had a duty of candour process in place to ensure people had been appropriately informed of an incident and the actions that had been taken to prevent recurrence. 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.

Safety thermometer

- The NHS safety thermometer is a national improvement tool for measuring, monitoring and analysing avoidable harm to patients and 'harm free' care. Performance

Medical care

against the four possible harms; falls, pressure ulcers, catheter acquired urinary tract infections (CAUTI) and blood clots (venous thromboembolism or VTE), was monitored on a monthly basis.

- Safety thermometer information for medical services showed that between January 2015 and January 2016 there had been no pressure ulcers, falls or CAUTI's which resulted in harm.
- The total number of recorded incidents of falls between January 2015 and December 2015 was 25.
- The trust monitored incidents of pressure ulcers and falls through their performance dashboard each month. However these were not discussed at every divisional governance committee meeting.
- Safety thermometer information was prominently displayed on the electronic information boards on all of the medical wards and units we visited.
- Services had a 'call not fall' process in place which highlighted to patients to call for help and support if required. Information was prominently displayed behind each bed on wards that we visited. Staff said this had helped reduce the number of falls.

Cleanliness, infection control and hygiene

- Staff followed good practice guidance in relation to the control and prevention of infection in line with trust policies and procedures. There was a sufficient number of hand wash sinks and hand gels. Hand towel and soap dispensers were adequately stocked. We observed staff following hand hygiene practice, bare below the elbow and using personal protective equipment where appropriate.
- All wards had antibacterial gel dispensers at the entrances and by people's bedside areas. Appropriate signage regarding hand washing for staff and visitors was on display.
- Between April 2015 and December 2015 medical services reported no cases of clostridium difficle, methicillin-resistant staphylococcus aureus (MRSA) or methicillin-susceptible staphylococcus aureus (MSSA).
- Wards used the 'I am clean' stickers to inform colleagues at a glance that equipment or furniture had been cleaned and was ready for use. Staff we spoke with understood this labelling system.
- All the wards and units we visited were visibly clean and free from odour. We observed that cleaning of the environment was thorough and we saw this being undertaken during our visit.

- Monthly infection control audits were undertaken across all wards which looked at standards such as the cleanliness of patient equipment. The overall score for medical wards was above 90%. Any actions identified were circulated to ward managers to implement.
- Monthly hand hygiene audits were undertaken by staff being observed. Results were all above the trust target of 95%.
- Patient led assessments of the environment (PLACE) in 2015 showed a standard of 98% in the trust for cleanliness which was the same as the England average.
- Side rooms were used as isolation rooms for patients at increased risk of cross infection. There was clear signage outside the rooms so that staff were aware of the increased precautions they must take when entering and leaving the room.
- When providing therapy to cystic fibrosis patients in the gym we saw this was cleaned between patients to ensure there was no cross contamination of infections.
- We observed that the disposal of sharps, such as needle sticks followed good practice guidance. Most sharps containers were dated and signed on assembly, and the temporary closure was used when sharps containers were not in use. However, on holly suite and cherry ward there was no date on the sharp box on the resuscitation trolley.
- Cleaning schedules were in place and had been completed as required, therefore reducing the risk of cross infection.

Environment and equipment

- In order to maintain the security of patients, visitors were required to use the intercom system outside wards to identify themselves on arrival before they were able to access the ward. Staff had access passes.
- All the areas we visited were bright and well organised; however there was limited space on the discharge lounge with only chairs for up to nine patients at a time. It was adequately resourced and drinks and snacks were available. There was direct access to the road which enabled relatives and carers to collect patients without having to go through the main hospital.
- Each ward had designated toilets and showers for male and female patients; however on birch ward shower facilities were not marked male and female. It was unclear if these were shared facilities.
- Each clinical area had resuscitation equipment readily available. There were systems in place to ensure it was

checked and ready for use on a daily basis. Records indicated daily checks of the equipment took place on all of the wards and units we visited. This meant there was emergency equipment available and in date when required.

- There were systems to maintain and service equipment. Records indicated that the defibrillator equipment had been checked and hoists had been serviced regularly. Electrical equipment was tested regularly and electrical safety certificates showed it had been tested within the last 12 months.
- Cleaning chemicals were left in an unlocked area on the maple suite. These should have been stored securely as the chemicals were potentially hazardous and presented a risk to people's health.
- On the maple suite the dirty utility room was left unlocked where clinical waste was stored. This meant there was a risk that clinical waste could be accessed by patients and the public which presented a risk of harm to people's health.
- On cherry ward there were needles and sharp instruments in an unlocked stock cupboard which meant there was a risk that these were accessible to patients and the public.
- Patient led assessments of the environment (PLACE) in 2015 showed a standard of 96%. This was higher (better) than the England average of 90%.
- The catheter labs stored clinical equipment and appliances as well intravenous fluids in a separate store room. The store room had direct access to two of the treatment rooms where patients were undergoing procedures. It also had a door which led directly onto the main hospital corridor. We observed that this door was unlocked. We raised this with staff who confirmed it was normally left open during the day. However, staff recognised this posed a risk and immediately locked the door.
- Throughout our inspection we did not identify any major environmental risks or hazards.

Medicines

- Between January 2015 and December 2015 there were 62 medication errors reported in medical services. Of those, 23 reported were incorrectly prescribed or administered medication, with 13 of these categorised as a near miss.

- We looked at the prescription and medicine records for 13 patients. We saw arrangements were in place for recording the administration of medicines. These records were clear and fully completed.
- Any omissions of medication were reviewed, although not always on a daily basis.
- Medicines requiring cool storage at temperatures below eight degrees centigrade were appropriately stored in fridges. Daily temperature checklists were completed on the wards we visited. Staff were able to tell us the system identified to follow up if there were gaps in these records.
- Controlled drugs (medicines which are required to be stored and recorded separately) were stored and recorded appropriately. Access was limited to qualified staff employed by the trust. Two nurses were observed following the correct procedures for the recording and administration of controlled drugs for a patient.
- Emergency medicines were available for use and records indicated these were regularly checked
- We observed medication rounds on cherry ward and maple ward. We heard nurses ask patients their name and date of birth before administering medication. This helped staff to ensure they were giving prescribed medicines to the correct person.
- Patients were provided with a lockable drawer or cupboard in which to store their medication. Patients were able to take their medication at the times they were used to taking it at home. This meant that patients were given a choice and steps were taken to maintain their independence.
- A member of the pharmacy team visited medical wards regularly. Pharmacy staff checked that the medicines patients were taking when they were admitted to the wards were correct and that records were up to date.
- Suitable cupboard and cabinets were in place to store medicines. This included a designated room on each ward to store medicines. We sample checked medicines on the wards and found them to be in date, indicating there was good stock management systems in place.
- The service undertook audits of the storage of medications on an annual basis and medical wards were meeting the majority of standards, except for the coronary care unit where patient medicines drawers were not all kept locked. Actions had been identified to improve performance.
- Staff undertook annual training in medicines management. The compliance rate was 100%

Medical care

Records

- Current standards against which medical records are audited, based on NHSLA (National Health Service litigation authority) recommendations, were not fit for purpose for the electronic patient records used at the trust. The trust was in the process of developing a set of standards for each service area which was due to be completed in June 2016.
- We reviewed 23 care records on the electronic patient record system. We saw that recent entries were easy to follow and had detailed information for patients' care and treatment and all had a completed nursing assessment and a clinical management plan.
- We looked at 18 records to see if they had been seen by a consultant within 12 hours of admission and found they had all been seen and it had been recorded on the system.
- Patient records included a range of risk assessments and care plans that were completed on admission and were updated throughout a patient's stay.
- Wards and units had paper records for consent forms and investigations undertaken, such as ECG's, during the current admission. These were kept in patient note trolleys or areas which were not locked, but were kept away from patient and public areas. This helped ensure that patient confidentiality was not breached. All this information was scanned onto the electronic patient record system as soon as patients were discharged.
- The majority of patient information boards that were visible in ward corridors respected patient confidentiality by patient names being covered up or not visible by patients and the public. Patient information boards provided, at a glance, an overview of the key risks, medication and discharge plans for each patient.
- Staff said they received an email each Wednesday to let them know of any changes or updates to the electronic patient record system.

Safeguarding

- Safeguarding policies and procedures were in place and staff knew how to refer a safeguarding issue to protect adults and children from abuse. The trust had a safeguarding team which provided guidance during the day in the week. Staff had access to advice out of hours and at weekends from the hospital on-call manager.

- Training statistics provided by the trust showed that 91% of staff on medical wards had completed level 1 safeguarding adult training and 76% had completed level 2 training. This was below the trust target of 95%
- The trust target for safeguarding children was 95% and compliance rates for safeguarding children level 1 was 92% and level 2 was 88%.
- Basic Safeguarding training was included in induction training for all temporary staff before commencing work on the wards.
- Between January 2015 and September 2015 there had been 297 contacts with the safeguarding team from staff across the trust. This had shown an increase from the previous year.
- Staff we spoke had a clear understanding of the trust safeguarding policy. Staff on the wards told us they received feedback from safeguarding referrals they made. They also received feedback and learning from other safeguarding referrals at team meetings and in safety huddles.

Mandatory training

- Staff received mandatory training on a rolling basis in areas such as infection control, manual handling and fire. The trust target was 95%.
- At the time of our inspection the majority of staff in medical services had completed their mandatory training that they were required to do. However, there were some areas that fell below the trust target. For example for manual handling only 84% of staff had completed the training and only 71% of staff identified to undertake intermediate life support training had completed it.
- Staff received an email alert within a month of when their mandatory training was due. This meant they could book on a course to ensure they were complaint with their training by the due date.

Assessing and responding to patient risk

- A modified early warning score system (MEWS) was used throughout the trust to alert staff if a patient's condition was deteriorating. This is a basic set of observations such as respiratory rate, temperature, blood pressure and pain score and is used to alert staff to any changes in a patient's condition.
- Early warning indicators were regularly checked and assessed. When the scores indicated that medical reviews were required, staff had escalated their

Medical care

concerns. There was a medical emergency outreach team which was used for patients whose early warning score was above a certain level (a score of seven or above). Repeated checks of the early warning scores were documented accurately.

- For patients that were transferred from intensive care to the coronary care unit, early warning indicators were only in paper format and not on the electronic system. This meant there was a risk that important information may be missed.

- There was an established audit programme which required individual wards to audit the accuracy of the early warning scores. This was done on a monthly basis. Between April 2015 and September 2015 the target of 95% for all observations to be completed correctly was achieved. However between October 2015 and December 2015, this had not been achieved. Recommendations were made for services to identify actions to improve standards.

- Upon admission to medical wards, staff carried out risk assessments to identify patients at risk of harm. Patients at high risk were placed on care pathways, and care plans were put in place to ensure they received the right level of care. The risk assessments included falls, use of bed rails, pressure ulcer and nutrition (malnutrition universal screening tool or MUST).

- Observational comfort rounds were carried out by nurses every one to two hours during the day time and 2two hourly at night. Depending on individual need to assess patient risk on an ongoing basis. These had all been completed on the patient records we checked.

Nursing staffing

- Staffing on a day to day basis was reviewed at the trust bed management meetings and the trust safety huddle meeting with the chief executive.

- In February 2016 there were eight whole time equivalent nursing vacancies in medical services. This was recorded on the risk register for the catheter laboratory. Actions were identified to mitigate this risk, such as a rolling recruitment programme. Managers knew where there were staffing shortfalls and where there was surplus on other wards so that staff that could be called on if needed.

- The turnover rate for nursing staff in medical services was 7%. This was below the trust target of 9%

- Each ward had a planned nurse staffing rota and reported on a daily basis if shifts had not been covered. The service used the Association of UK University Hospitals Safer Nursing Care acuity tool (AUKUH) to measure staffing levels twice a year.

- Staff on the coronary care unit (CCU) looked after patients who needed level one and level two care. They assessed the acuity of the patients on a regular basis to determine if they were level one or level two patients. This was done to ensure appropriate skill mix of staff. Level two patients require higher levels of care and more detailed observation and intervention.

- We reviewed the use of agency and bank nurses between April 2015 and March 2016 and found there were a number of areas which used temporary staff regularly although not excessively. For example, on cherry ward the average number of shifts filled with temporary staff was 10% and on the coronary care unit this was 9%. This was for a number of reasons including vacancies and sickness. There was a buddy system in place with a permanent member of staff so that temporary staff were supported on the wards.

- Medical wards displayed nurse staffing information on a board at the ward entrance in line with guidance contained in the Department of Health document 'Hard Choices'. This included the planned and actual staffing levels. This meant that people who used the services were aware of the available staff and whether staffing levels were in line with the planned requirement.

- We reviewed staffing figures for October 2015 to February 2016. All medical wards were above the national benchmark of 80% during the day and night. For example the average fill rate for cherry ward was 98% during the day and 93% at night and birch ward was 95% during the day and 97% at night.

- The service used the trust escalation procedures if there was a reduction in the number of nursing staff of duty. This included undertaking a risk assessment and escalating the issues to the head of nursing.

- Senior nurses who were supernummary (in addition to the planned number of nurses so they could oversee the running of the ward and assist where necessary) said they often completed shifts due to shortage of staff due to short notice sickness. This meant management tasks were often left uncompleted.

- Nursing handovers were structured and information handed over to the incoming staff included allergies,

Medical care

mobility of patients, incidents and expected date of discharge. Each member of staff on the ward had access to a copy of the handover sheet at the beginning of each shift.

Medical staffing

- Rotas were completed for all medical staff which included out of hours cover for all medical admissions and all medical inpatients across all wards. All medical trainees contributed to this rota. The information we reviewed showed that medical staffing was appropriate at the time of the inspection.
- Patients did not always see a doctor at the weekends, although there was sufficient cover outside normal working hours and at weekends for emergency reviews.
- There was an on call rota which ensured there was a consultant available 24 hours a day seven days a week for advice.
- The percentage of consultants working in medical services trust wide was 42% which was higher (better) than the England average of 34%. The percentage of registrars was 46% which was above (better) than the England average of 39%. The percentage of junior doctors was 12% which was lower (worse) than the England average of 22%. There were no middle grade levels compared with the England average of 6%.
- In December 2015 there were 3.5 whole time equivalent medical staff vacancies in medical services.
- The turnover rate for medical staff in medical services was 33%. This was above the trust target of 9%.
- Information provided by the trust showed that locum medical staff had not been used between April 2014 and March 2015.
- We saw a number of ward rounds which were attended by the consultant as well as junior doctors and nurses. There was effective verbal communication between each other and the patients.

Major incident awareness and training

- There were documented major incident plans within medical areas and these listed key risks that could affect the provision of care and treatment. There were clear instructions for staff to follow in the event of a fire or other major incident.

- Staff were aware of what they would need to do in a major incident and knew how to find the trust policy and access key documents and guidance. We saw a plan to ensure there were sufficient cover to look after patients during the junior doctor's strike.
- All staff undertook emergency planning awareness training as part of their induction.

Are medical care services effective?

Good 🟢

We rated medical services as 'Good' for Effective because:

- Care was provided in line with national best practice guidelines and medical services participated in the majority of clinical audits where they were eligible to take part. For example the heart failure audit.
- Nutrition and fluid assessments were regularly assessed and patients were well supported in meeting their nutritional and hydration needs. There was a focus on discharge planning from the moment of admission and there was good multidisciplinary working to support this.
- There was evidence of providing services seven days a week. Most staff said they were supported effectively and the majority of staff had received their annual appraisal which was above the trust target.
- Pain was managed effectively and pain scores were being completed. Staff had access to information they needed to support patients.
- We found that staff members' understanding and awareness of assessing peoples' capacity to make decisions about their care and treatment was good and applications for deprivation of liberty safeguarding were completed correctly. There was good recording of both verbal and written consent.

However,

- Recent national audits indicated that although there had been progress the service still needed to make improvements to the care and treatment of people who had mesothelioma [lung] cancer, as part of their joint working initiative with a neighbouring trust.

Evidence-based care and treatment

- The service used national and best practice guidelines to care for and treat patients. The service were

Medical care

monitoring compliance with National Institute for Health and Care Excellence (NICE) guidance and were taking steps to improve compliance where further actions had been identified.

- The service participated in all of the clinical audits for which it was eligible through the advancing and national quality programmes. Where the service was not meeting the appropriate care score target, action plans were completed following the clinical audit to address areas identified for improvement. For example, an action plan had been put in place to improve the results of the mesothelioma [lung] cancer audit. This included ensuring staging was discussed and collected at the multidisciplinary team meeting or at a set point of the patient pathway.
- Care pathways were in place for patients who received ambulatory care (ambulatory care is medical care provided on an outpatient or day case basis). These included care of patients with chest pain, and difficulties with breathing. The care pathways were based on NICE guidance.
- There were frequent recent local audits that had been completed on the wards. These included documentation, sepsis and fasting audits. Senior staff said they received the results of the audits and any learning was shared with them via email.
- There were currently no national standards that cover the type of coronary care unit at the hospital. The trust had developed a local framework and standards governing how patients were managed. This was based on critical care national standards.
- Local policies and procedures were followed in relation to the care of patients. The service actively engaged with research networks and recruited well to national research studies. For example the assessment of tapping techniques in cystic fibrosis patients. These techniques are used to clear the airways in patients.

Pain relief

- Pain relief was managed on an individual basis and was regularly monitored. Patients told us they were consistently asked about their pain and supported to manage it.
- We saw that patient's pain levels were recorded on early warning scores documentation.
- Medical services had access to the acute pain team six days a week to help support patients to manage their care.

Nutrition and hydration

- Patients we spoke with said they were happy with the standard and choice of food available. If patients missed a meal, as they were not on the ward at the time, staff were able to order a snack for them.
- We saw there was a comprehensive selection of meals available from a menu which was available for patients. Meals were also available for patients with different dietary, cultural and religious requirements; for example, halal meals.
- We saw drinks were available and in reach for all patients.
- The hospital used the malnutrition universal screening tool (MUST) to assess patient's nutritional needs. An audit of the completion of the tool was undertaken as part of the food standards assessment and the trust scored a green rating.
- We looked at nutritional and fluid charts for 18 patients. They had been fully completed.
- When patients had a poor intake of food due to their condition, medical staff prescribed appropriate dietary supplements. There were also dedicated chefs on the cystic fibrosis wards to ensure that patients had the correct diet when they required it.
- Patient records showed there was regular dietician involvement when patients were identified as being at risk.
- Patients and carers were aware of the care partner scheme at the trust which enabled carers to provide help with food and drink as well as additional care needs.
- Patient led assessments of food and hydration (PLACE) in 2015 showed a standard of 99%. This was higher (better) than the England average of 89%.

Patient outcomes

- The myocardial ischaemia national audit project (MINAP) is a national clinical audit of the management of heart attacks. MINAP audit results for 2013/14 for this trust showed the number of patients diagnosed with a non-ST segment elevation myocardial infarction (N-STEMI) seen by a cardiologist prior to discharge was better than the national average at 99%. 79% of patients with an N-STEMI were admitted to a cardiology ward.

Medical care

This was better than the England average of 55%. NSTEMI is a type of heart attack that does not benefit from immediate percutaneous coronary intervention (PCI).

- The 2013/2014 heart failure audit showed the hospital performed better than average for all four of the clinical (in hospital) indicators and in six of the seven clinical (discharge) indicators.
- The service had an action plan in place to improve standards of care for patients with heart failure. This included offering patients admitted with heart failure a two week follow up after being discharged.
- Services took part in the national audit of cardiac rhythm management devices (CRM). This looked at pacemaker insertion and implantable cardioverter defibrillators as well as cardia resynchronisation therapy (CRT). The results for 2013/14 showed the trust were performing around the national average for most areas but better than the national average for CRT being used as primary prevention. The national average was 72% and the trust result was 81%.
- The trust did not take part in the sentinel stroke national audit programme (SNAPP) due to the services provided at the hospital. However the service had developed a set of standards based on national standards. Between December 2015 and March 2016 it met eight of the ten standards. It did not meet its formal swallow assessments within 72 hours standard or its onward referral to local stoke services standard. There were actions in place to improve performance against these.
- The readmission rate was worse than the England average for elective (planned) admissions and better than the England average for non-elective (unplanned) admissions.
- Specialist acute Trusts do not calculate their mortality rates using the summary hospital-level mortality indicator (SHMI). Instead, because of the specialist nature of its services, Liverpool Heart and Chest Hospital has devised its own Hospital Standardised Mortality ratio that is updated each month as part of its performance management arrangements. The SHMI is the ratio between the actual number of patients who die following hospitalisation at the trust and the number that would be expected to die on the basis of average England figures, given the characteristics of the patients treated at the hospital. The risk score is the ratio between the actual and expected number of adverse (worse) outcomes. A score of 100 would mean that the number of adverse outcomes is as expected compared to England. A score of over 100 means more adverse outcomes than expected and a score of less than 100 means less adverse (better) outcomes than expected. In December 2015 the trust's own hospital standardised mortality ratio score was 100.

Competent staff

- Staff told us they received an annual appraisal. The trust's figures at the end of March2016 showed 94% of medical nursing and other staff in medical care services had received their annual appraisal. All medical staff had an appraisal apart from two doctors who were on long term sick or maternity leave. The trust target was 85%.
- The trust had developed a clinical supervision model which focused on meeting individual staff needs. Posters displaying the names of clinical supervisors were available on all wards. The purpose of clinical supervision is to provide a safe and confidential environment for staff to reflect on and discuss their work and their personal and professional responses to their work. Nurses told us they had regular meetings with their manager and were able to speak to their manager at any time.
- Staff we spoke with confirmed they had an adequate induction. Newly appointed staff said their inductions had been planned and delivered well.
- There was a preceptorship programme in place which supported junior nursing staff. Their competency in undertaking care procedures were assessed by qualified staff. We saw that competency records were available on each ward, which ensured managers were aware of the skills staff had.
- Staff were actively supported to undertake additional training and education to enhance their skills. For example, a doctor was undertaking their master's degree in education to support other staff in their continued development.
- The trust was involved in the apprenticeship nursing scheme with the skills for health academy. Cadet nurses were undertaking a national vocational qualification in care. This helped ensure that any future applications for nursing posts were from competent people who had the skills and experience required.

Medical care

- Staff in bands 1 to 4 were offered opportunities to undertake appropriate vocational qualifications. There were a number of staff in medical services which had gained such qualifications.
- Medical services ensured healthcare support workers undertook the care certificate. The care certificate is knowledge and competency based and sets out the learning outcomes and standards of behaviours that must be expected of staff giving support to clinical roles such as healthcare assistants. Previous work undertaken by the trust helped guide the national recommendations for implementation of the care certificate.
- We saw there was a range of specialist nurses; for example a lead for dementia and nutrition. Staff told us they knew how to contact these specialists and felt supported by them.

Multidisciplinary working

- Multidisciplinary team (MDT) working was established on the medical wards. We saw good examples of MDT working on all of the wards and units we visited. This included nursing staff as well as therapy staff such as a physiotherapists and specialist nurses.
- Ward teams had access to the full range of allied health professionals and team members described good, collaborative working practices. There was a joined-up and thorough approach to assessing the range of people's needs and a consistent approach to ensuring assessments were regularly reviewed by all team members and kept up to date.
- There was a cystic fibrosis team which consisted of nurses, doctors, physiotherapists, pharmacist and the exercise team. Patients and staff spoke very highly of this MDT team as they provided a full range of care needs.
- Staff had access to psychiatric services and the trust employed a psychologist who provided advice and support to staff.
- Daily ward meetings were held on most of the wards we visited. These were called board rounds or safety huddles and they reviewed discharge planning and confirmed actions for those people who had complex factors affecting their discharge.
- Patients were referred to community services if they required ongoing aftercare.

Seven-day services

- Staff and patients told us diagnostic services were available 24 hours a day, seven days a week.
- Consultants were available on site during the day 9am to 9.30pm Monday to Friday and 8am to 5pm on Saturday. There was an on-site registrar 24 hours a day, seven days a week.
- Physiotherapy services were only available six days a week but staff reported easy access to them out of hours. However, this service was available seven days a week for cystic fibrosis patients.
- Pharmacy services were available six days a week, with an out of hour's emergency on call rota to ensure patients' medication was available on discharge.

Access to information

- Staff had access to the information they needed to deliver effective care and treatment to patients in a timely manner including test results, risk assessments, and medical and nursing records.
- There were computers available on the wards we visited, which staff accessed for patient and trust information. Policies, protocols and procedures were kept on the trust's intranet, which meant staff had access to them when required.
- On the majority of wards there were files containing minutes of meetings, ward protocols and audits, which were available to staff.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- The majority of staff we spoke to knew about the key principles of the Mental Capacity Act 2005 (MCA) and how these applied to patient care.
- Staff undertook MCA training every three years. 90% of staff had completed the training, which was below the trust target of 95%.
- Staff had knowledge and understanding of the procedures relating to the Deprivation of Liberty Safeguards (DoLS). DoLS are part of the Mental Capacity Act 2005. They aim to make sure that people in hospital are looked after in a way that does not inappropriately restrict their freedom and are only done when it is in the best interest of the person and there is no other way to look after them. This includes people who may lack capacity. We saw examples of DoLS paperwork completed fully and accurately. Formal capacity assessments were also recorded.

Medical care

- Staff received training in the principals of DoLS. 92% of staff had completed this training, which was below the trust target of 95%.
- Not all staff we spoke to on the wards knew that the use of bed rails can be a form of restraint as outlined in the Royal College of Nursing (RCN) rights, risk and responsibilities guidance. However they said they would not routinely put up bed rails for people who lacked capacity and senior staff said this was outlined in mandatory training. However, senior staff recognised that this may not be explicit in the current training delivered and said they would look into this.
- Between October 2015 and September 2015 there had been 34 DoLS applications across the trust, which was a significant increase from the previous year. This showed that staff had an increased awareness and understanding of DoLS.
- Staff had the appropriate skills and knowledge to obtain consent from patients. The staff we spoke with were clear on how they sought verbal informed consent and written consent before providing care or treatment. We saw written records that indicated consent had been obtained from patients prior to procedures or treatment.

Are medical care services caring?

Outstanding ☆

We rated medical services as 'Outstanding' for Caring because:

- Patients told us staff were caring, kind and respected their wishes. We saw staff interactions with people were person-centred, and people we spoke with during the inspection were complimentary about the staff who cared for them.
- Patients received compassionate care and their dignity and respect were maintained. Staff were highly motivated to offer support to patients which was kind and caring and they were willing to go the extra mile.
- Patients and their relatives were supported with their emotional needs and there were services in place to provide support for patients and relatives. Patients could be referred to external counselling services if they required ongoing support. The friends and family test was positive for the medical wards.

- Patients and their relatives confirmed they were kept informed about their treatment plans and were given information to support decision-making.

Compassionate care

- Medical services were delivered by caring and compassionate staff. We observed numerous examples of compassionate care provided to patients. There was an obvious positive rapport between patients and staff.
- When patients arrived by ambulance for a procedure staff responded by meeting them in the ambulance and explained everything to them and their relatives whilst waiting for the doctors to get ready for the procedure. This was confirmed by patients we spoke to who told us they felt 'special and staff knew their name and what needs they had'.
- Staff treated patients with dignity and respect.
- The day case service had developed a bespoke lounge suit for patients to use on the holly unit. This ensured that patients' privacy and dignity was maintained and enabled them to stay with their relative or carer until they had their procedure.
- We spoke to 12 patients throughout our inspection. All the patients we spoke with were positive about their care and treatment. Comments included 'staff have been brilliant', 'staff deliver an A1 service' and 'you could ask for nothing more'. Patients said that staff always introduced themselves.
- The friends and family test results were overwhelmingly positive for the medical wards. The average response rate was 39% which was higher than the England average of 29%. The friends and family test asks patients how likely they are to recommend a hospital after treatment. 100% of patients in January 2016 said they would recommend medical services at the hospital.
- In the cancer patient experience survey for inpatient stay 2013/2014, the trust ranked within the top 20% of all trusts for 13 of the 34 areas. These included 'being asked what name they preferred to be called', 'patients were able to discuss worries or fears with staff' and 'patients were involved in discussions about care and treatment'. However, the trust fell within the bottom 20% of trusts for two of the areas; for example, not giving information about support groups.
- We saw that people had access to call bells and staff responded promptly.

Medical care

- The trust performed around the same as the England average in dignity and wellbeing of the patient-led assessments of the care environment (PLACE).
- The trust performed better than similar trusts in 10 of the 12 areas of the 2014 CQC inpatient survey.

Understanding and involvement of patients and those close to them

- Patients all had a named nurse and consultant. Patients were aware of this, and on the wards we visited, the relevant names were displayed on a board above the bed. Patients said they had been involved in their care and were aware of the discharge plans in place. Most patients could explain their care plan.
- Patients said they felt safe on the ward and had been orientated to the ward area on admission. If there was more than one room available on a ward patients were able to choose which one they preferred.
- For some procedures patients were awake. Throughout the procedure staff communicated well with the patient, informing them of what was happening and how things were progressing to help put them at ease.
- Family members said they were kept well informed about how their relative was progressing. Patients we spoke with said they had received good information about their condition and treatment.
- On the holly unit, friends and relatives were given a pager so they could go off the unit and know when the patient's procedure was over so they could be reunited as soon as possible.

Emotional support

- Staff felt they had sufficient time to spend with patients when they needed support.
- Visiting times for the wards met the needs of the friends and relatives we spoke to. Open visiting times were available if patients needed support from their relatives.
- We were told that staff had supported a family member to find alternative accommodation so they could support their relative whilst in hospital. This relieved pressure for the patient and their relative.
- Patients and those close to them told us that clinical staff were approachable and they were able to talk to them if they needed to. Patient anxieties and questions were openly discussed and patients spoke positively of the emotional support they received.
- Chaplaincy services were available for patients and relatives if required.

Are medical care services responsive?

Outstanding ☆

We rated medical services as 'Outstanding' for Responsive because:

- Services were planned to meet the needs of the local people that were flexible, adequately resourced and provided choice.
- There was sufficient bed capacity to meet the needs of patients and systems in place for the management of patients so they had continuity of care. In addition, a significant number of patients who experienced one or more ward moves during their admission did so only as part of their care pathway.
- Specialist nurses provided support and advice to staff and the service was meeting individual needs for patients who were living with dementia or a learning disability. There was a proactive approach to understanding the needs of different groups of people including those with complex needs.
- People were supported to raise a concern or a complaint. Complaints were investigated and lessons learnt were communicated to staff and improvements made.

However,

- There were a number of people who experienced delayed discharge because they were waiting for transfer back to another hospital following treatment. The majority of these delays were within 24 hours.

Service planning and delivery to meet the needs of local people

- The facilities and premises were appropriate for the services that were planned and delivered. There were excellent facilities in bedrooms, the majority of which had ensuite facilities. In areas where facilities were below the trust's high standards, such as birch ward and maple ward, medical services had plans in place to improve these.
- Medical services had a designated day care unit. This unit saw patients on an outpatient basis for further tests or follow up assessments to avoid unnecessary admission or a longer stay in hospital. Referrals were from consultants, GPs or the outpatient clinic. The unit

Medical care

was open Monday to Friday between 7.30 am to 8 pm. There was a clear standard operating procedure which detailed the inclusion and exclusion criteria for the types of patients suitable for the service to ensure they received the best care available.

- More procedures were being undertaken as a day case and the holly unit had been designed to meet the needs of the patients and relatives. The unit had excellent resources which included a relaxation room with massage chairs for patient and relatives and computers that provided access to the internet. There was also a fully equipped beverage bay were snacks and drinks were readily available..

- There was no nuclear cardiology service or in-house adult congenital heart disease service available at the hospital, which meant patients, had to be transferred to other hospitals for these services.

Access and flow

- Between January 2016 and March 2016 the average occupancy rate of medical wards was 81%. It is generally accepted that, when occupancy rates rise above 85%, it can start to affect the quality of care provided to patients and the orderly running of the hospital. However, this was not the case on the medical wards.

- The average length of stay for elective medicine at the hospital was shorter (better) than the England average at 3.4 days. The England average was 3.8 days. For non-elective (not planned) medicine it was 5 days and was shorter (better) than the England average of 6.8 days.

- In the period February 2015 to January 2016, 53% of patients experienced multiple ward moves during their stay. This was better than the previous year. The moves were part of the patient care pathway through services.

- Information provided by the trust showed that between August 2015 and January 2016, the number of patients on medical wards that were transferred to another ward after 10pm at night was relatively high at 389 with 51% of these moves from the coronary care unit. Staff told us this was for clinical reasons.

- There was a clear bed capacity escalation procedure to ensure there was a safe flow of patients from admission through to transfer or discharge.

- The hospital held daily bed management meetings Monday to Friday, attended by ward managers and matrons. Hospital co-ordinators supported these meetings by providing up to date information to plan

bed capacity and respond to acute bed availability pressures. Additional meetings were held depending on patient need. At the weekend, hospital co-ordinators were responsible for overseeing bed availability.

- There was a discharge team who supported patient discharges. This operated Monday to Friday 9am to 5pm. Discharges outside these hours were supported by the on call hospital co-ordinators. There was a clear discharge policy and a 24 hour discharge advice line for patients and families with any queries and issues. However, the discharge team did not include staff from social services.

- Each patient had a discharge pass which included important tasks that needed to be completed before they were discharged. For example, input required from therapists, planned date of discharge and transport requirements. This helped ensure patient discharges were safe.

- Between January 2015 to March 2015, 92% of patients received a copy of their discharge letter. The target was 95%. This was an improvement from previous months and the trust was committed to increasing this percentage

- Between January 2015 and March 2106 there were a total of 1137 delayed discharges across the trust; however only 42 of these were delayed for more than two days with the majority being delayed for up to 24 hours.

- Hospital episode statistics showed that between April 2013 and August 2015 the majority of delayed discharges at the trust were due to waiting for further care outside the hospital at 77%. This was much higher than the equivalent proportion for England at 20%. 17% of patient discharges were delayed waiting for completion of care assessments which was in line with similar organisations in the region. The trust was working with partner organisations to ensure that patients were discharged as soon as possible, but delayed discharges were not on the service risk register.

- The hospital had a discharge lounge which operated between the hours of 8am and 8pm Monday to Friday. A standard operating procedure for the discharge lounge outlined the types of patients suitable for the discharge lounge. Staff were able to tell us the type of patients that would be suitable. If a patient deteriorated, staff had direct access to medical and nursing staff on the adjourning ward.

Medical care

- During February 2015 and January 2016 referral to treatment times (RTT) for cardiology and thoracic medicine were above (better) than the England average. RTT was on the risk register with actions to mitigate the risk of not meeting targets. For example, regular performance monitoring and the recruitment of additional consultant staff.
- Services had developed an electronic scheduling system which showed the patient status between wards and the catheter labs when patients were undergoing a procedure. This helped monitor access and flow between ward areas. This system was also available to senior managers off site.

Meeting people's individual needs

- The trust used a red symbol of a person falling to indicate that a patient was at risk of falls. This alerted staff to look at the risk assessment and care plan to ensure that any necessary reasonable adjustments were made.
- The hospital was trialling the 'forget-me-not' sticker scheme on a number of wards. This was a discrete flower symbol used as visual reminder to staff that patients were living with dementia or were confused. This was to ensure that patients received appropriate care, reducing the stress for the patient and increasing safety.
- There was a specialist nurse who was the clinical lead for dementia. The nurse provided support for staff and a central point for queries. The trust also had access to psychiatric services that saw and assessed patients with a cognitive impairment, if required.
- On admission patients were assessed for dementia against set criteria, and support and further assessments were identified if required. Between April 2014 and March 2015, 95% of patients were assessed which was above the trust target of 90%.
- Each ward had an activity box and reminiscence files to provide stimulation and assist to orientate patients who had a cognitive impairment to time and place.
- The service had an action plan in place to implement the recommendations outlined in the national dementia strategy. This included recognising and assessing carer's needs, increased dementia awareness training for staff and patients to have active days and calm nights.
- Patients and family worked with staff to make improvements on the wards. For example, photographs and artwork on display showing local images that were familiar to patients. There were also scenic images of woodlands and nature to evoke a sense of freedom and calm for elderly patients.
- Translation services and interpreters were available to support patients whose first language was not English. Staff confirmed they knew how to access these services.
- Leaflets were available for patients about services and the care they were receiving. Staff knew how to access copies in an accessible format for people living with dementia or learning disabilities.
- We saw leaflets on the holly unit that were printed on yellow paper for people who have sight impairment.
- There was a liaison nurse on the holly unit who contacted patients before admission to identify any special needs that patients had. This had reduced the 'did not attend' rates and provided a positive experience for patients.
- People with a learning disability were offered pre-procedure appointments to help support them with the unfamiliar surroundings. There was also a hospital communication book and pictorial meal menus.
- There was a draft learning disability and complex care needs policy to provide educational structure to the patients' journey throughout their stay on the ward.
- The catheter lab co-ordinator tracked patients who were arriving by ambulance and ensured that resources were available for the particular needs of the patients.
- Services responded to patients and their family's needs on cherry ward. Patients with cystic fibrosis often went out during the day and the entrance to the ward was directly from the road. There was also a fully equipped day room for relatives and baby changing facilities on the ward.
- Care plans we saw were not always personalised to identify individual needs but did contain the necessary information to ensure that patients were not at risk and their care was managed safely.
- There was a nurse specialist for diabetes who offered specialist advice to staff caring for people with this condition.

Learning from complaints and concerns

- Staff understood the process for receiving and handling complaints and were able to give examples of how they would deal with a complaint effectively.
- Patients told us they knew how to make a complaint. Posters were displayed around the hospital detailing

Medical care

how to make a complaint, although they were only small and not prominently displayed on some of the wards. Leaflets detailing how to make a complaint were readily available in all areas. Notice boards within the clinical areas included information about the number of complaints and any comments for improvement.

- The trust recorded complaints electronically on the trust-wide system. The local ward managers and matrons were responsible for investigating complaints in their areas. Ward managers told us how they were working to achieve 'on the spot' resolutions of concerns where possible.
- Information provided by the trust showed there had been 14 complaints raised across medical services between February 2015 and January 2016. All complaints had been acknowledged within three days and responded to within the agreed timeframe.
- An example of learning from a complaint was to ensure that admission letters include information on stopping certain medication before a procedure.
- Complaints were discussed at governance meetings which also outlined key lessons learnt to be shared with staff. Staff told us managers discussed information about complaints during staff meetings to facilitate learning.

Are medical care services well-led?

Outstanding ☆

We rated medical services as 'Outstanding' for Well-led because:

- Medical care services were well led with evidence of effective communication within teams. The visibility of senior management was good and there were information boards to highlight the ward's performance displayed on each ward area.
- There was a specific cardiology strategy for medical services and full engagement in the trust over strategy and plans.
- There was a clear governance structure and risk registers were in place and had actions identified. Staff felt supported and able to speak up if they had concerns. Medical services captured views of people who used the services with learning highlighted to make

changes to the care provided. People would recommend the hospital to friends or a relative. There was good staff engagement with staff being involved in making improvements for services.
- All staff were committed to delivering good, compassionate care and were motivated to work at the hospital.

However,

- Staff were not always correctly completing the risk register with identified actions and there was a risk on the risk register since 2011. However the trust were able to show that the identified risk was monitored monthly and carried over on an updated risk register.

Vision and strategy for this service

- The trust's vision was summarised 'to be the primary integrated cardiothoracic healthcare organisation in the country'. The mission underpinning this was excellent, compassionate and safe care for every patient every day. The values were patient and family centred, accountability, continuous improvement and teamwork (PACT). Staff were aware of the vision and values and these were displayed on the notice boards.
- The Trust's strategic objectives were based on this vision and these objectives were cascaded down to service and individual objectives for staff.
- Medical services had a cardiology strategy with the key driver being the healthy Liverpool programme, which was to eradicate duplicate services and develop new models of care. The strategy outlined objectives to support this programme and the trust vision. These included improving outcomes for people with cardiovascular disease.
- NHS staff survey results for 2015 showed that 94% of staff in medical services said they had clear planned goals and objectives. The number of responses was 182.

Governance, risk management and quality measurement

- The risk register highlighted risks across medical services and actions were in place to address concerns. For example, risk of infection and failure to meet 18 week referral to treatment target.
- Risks were reviewed regularly; however, we were not assured that risks were being managed in an effective way as there was a risk on the risk register since 2011. Senior management staff said this may be an old risk

that had been reopened. We asked if they could confirm this but at the time of writing the report this information had not been received .This meant it was not clear if all risks were being managed in a timely way. Staff were not always putting the actions to mitigate the risk in the correct section on the system, which meant it was unclear to us if actions had been identified. Senior staff assured us they would look into this matter to ensure the risk register was a correct record.

- Senior staff knew there was a risk register and ward managers were able to tell us what the key risks were for their area of responsibility.

- There was a clear governance reporting structure in medical services and the main governance committee was held on a monthly basis. During the meeting a review of the risk register, incident, infection, audits, complaints and feedback from services were undertaken. Actions were identified but the date the action was to have been completed (in order to help track progress) was not always clear.

- Staff were not able to tell us how their ward performance was monitored, though they were aware that data was collected and discussed at governance meetings.

- Staff said that multidisciplinary team meetings were held regularly on each medical ward. There was evidence on wards that regular team meetings took place and these were minuted and cascaded to staff via email. There was also a copy of the minutes in a file on the ward for staff to read.

- The trust was introducing a nursing assessment and accreditation system which looked at ward performance. The aim was for all wards to achieve ECS (excellent, compassionate and safe care) status by 2017. We reviewed actions plans for medical wards following initial assessments and all had clear areas for improvement with target dates and the person responsible identified.

Leadership of service

- Staff reported there was clear visibility of members of the trust board throughout the service. Staff could explain the leadership structure within the trust and the executive team were accessible to staff.

- All nursing staff spoke highly of the ward managers as leaders and told us they received good support. We observed good working relationships within all teams.

- Doctors told us that senior medical staff were accessible and responsive and they received good leadership and support.

- Medical services were supporting staff to undertake the leadership development programme created by the trust.

- We observed that a number of staff had been supported to develop further leadership skills by rotating to other wards. Senior management staff met regularly with them to monitor their progress and to provide support.

Culture within the service

- The majority of staff said they felt supported and able to speak up if they had concerns.

- One of the wards had recently completed a survey looking at working conditions, perceptions of senior managers, and job satisfaction. Actions were identified to improve the culture. For example, promoting the sharing of information and ideas and ensuring there was equity in allocation of places on training courses.

- In the 2015 staff survey, 82% of staff in medical services said they were enthusiastic about their job and 64% looked forward to going to work. These scores were about the same as the national average.

- 88% of staff in medical services believed that the organisation provided equal opportunities for career progression.

- The latest staff survey results for 2015 results showed that 93% of staff would recommend medical services as a place to be treated. 68% of staff would recommend the service as a place to work. There were 223 responses which indicated good staff engagement with the survey.

Public engagement

- The catheter laboratory undertook a patient survey to understand the patient experience. Information was analysed to inform future service provision.

- The hospital participated in the NHS friends and family test giving people who used services the opportunity to provide feedback about care and treatment. 99% of patients would recommend medical inpatient services at the hospital to friends or a relative.

- The governance committee heard a patient story at the beginning of each meeting and any learning was taken forward to improve services.

Staff engagement

Medical care

- The trust celebrated the achievements of staff at an annual event. At the last event medical services had a number of staff nominated for their work at the trust.
- There was also the employee of the month scheme which recognised staff who had gone the extra mile to provide patient care. There were several staff from medical services who had been awarded this title.
- The trust held regular listening into action meetings to capture staff feedback from all areas. This resulted in a number of projects which included medical services. For example the discharge lounge, and the home for lunch initiative, which aimed to discharge patients in the morning. Staff participated in the 2015 staff survey. This included how staff felt about medical services and their personal development. 78% off staff at the trust felt the training and development they had undertaken had helped them to deliver a better patient experience and 89% felt it had helped them to do the job more effectively. 81% felt they were valued by their manager. These scores were all better than the national averages.

Innovation, improvement and sustainability

- An analysis of the 2015 staff survey results showed 82% of staff in medical services, who responded, felt they were able to make suggestions to improve the work of their team/department. This was the better than the national average of 75%.

- The survey also showed that 78% of staff had frequent opportunities to show initiative in their role. 57% of staff were involved in deciding on changes to improve services for patients. This was slightly better than the national average of 53%.
- We saw an example of where staff had written a service review on their own initiative and the executive team had been receptive and put in place one of the recommendations made.
- Medical services developed the lateral atrial appendage occlusion service (LAAO) which has the highest activity rates in the country and implemented the first leadless pacemaker. LAAO is a treatment to reduce the risk of atrial blood clots entering the bloodstream and causing a stroke.
- Services commenced the atrial fibrillation support group for patients.
- There was an improvement plan for the coronary care unit following self-assessment and staff engagement. The plan included senior nursing and medical leadership, a skills and competency framework and escalation procedures. The trust was also developing a local safer nursing care acuity tool based on existing national standards.
- A number of staff received external awards for innovative projects; for example, for continuous glucose monitoring and the cardioversion service.
- Services were developing a web-based referral system to ensure patients waited the minimum time possible before receiving their treatment. The trust was working on a pilot of this with a number of neighbouring trusts.

Surgery

Safe	**Good**	🟢
Effective	**Good**	🟢
Caring	**Good**	🟢
Responsive	**Good**	🟢
Well-led	**Good**	🟢
Overall	**Good**	🟢

Information about the service

- Liverpool Heart and Chest Hospital (LHCH) provide specialist services in cardiothoracic surgery, cardiology, respiratory medicine including adult cystic fibrosis and diagnostic imaging, both in the hospital and out in the community.

- The catchment area includes 2.8 million people, spanning Merseyside, Cheshire, North Wales and the Isle of Man. Increasingly; referrals from outside these areas are received for highly specialised services such as aortics.

- The hospital comprised of 220 beds, 186 general and acute and 34 critical care. Surgical services are delivered from a theatre suite with nine theatres and a hybrid theatre for interventional surgical procedures. There are currently 12 cardiac consultants.

- The cardiac surgery and thoracic surgery specialist services formed part of the wider surgery division, which provides a range of supra regional and specialist tertiary cardiac, aortic and thoracic services to the North West, North Wales and the Isle of Man.

- Cardiac and aortic services at LHCH provided both tertiary and quaternary services regionally and nationally. The cardiac surgery department provides a full range of tertiary services including areas of specialty such as mini mitral surgery and mini aortic valve replacements.

- The thoracic service provides dedicated clinics in the Isle of Man to reduce travelling time for patients accessing thoracic services.

- During our inspection, we visited the theatre suites; Oak ward, Elm ward, Mulberry ward and Cedar ward.

We spoke with 10 medical staff, 33 nursing staff including managers, 24 members of the multi-disciplinary team, 12 patients and two patient's partners.

Surgery

Summary of findings

Overall, surgical services were rated as good.

- Systems were in place to ensure incidents were reported, investigated and lessons learnt. Incident management was in line with 'being open' and the 'duty of candour.' 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. Some nursing and medical staff we spoke with identified a limited knowledge of the 'duty of candour' regulation.

- Staff were caring, compassionate and respectful and were positive about working in the service. Medical staffing levels and skill mix were recognised as meeting current guidance. Operating theatres were established against the 'Association for Perioperative Practice (AfPP staffing recommendations). Shortfalls existed in nurse staffing levels across the service but ongoing recruitment and the introduction of new ways of working ensured sufficient staff worked within the service. None of the nursing staff we spoke with raised concerns about staffing levels and spoke positively of the staffing escalation process used to communicate and address staffing shortfalls.

- The training information provided by the trust showed shortfalls in staff attendance at mandatory training and adult safeguarding training. Medical trainees had limited or no access to human factors training and simulation training, whilst, cardiac training opportunities for medical trainees were variable.

- Care was provided in line with NICE CG50. Patient's risks were assessed to determine their fitness for surgery. The service had protocols and guidelines in place to assess and monitor patient risk in real time. Consent processes were robust and documentation associated with these processes was adapted to the individual patient's needs and understanding.

- Patients received evidenced based care and treatment and patient outcomes had improved. The

'Patient-led assessments of the care environment' assessment in 2015 rated the trust higher than the national average on privacy, dignity & wellbeing, the dementia friendly environment, facilities and food.

- Good multi-disciplinary working existed between the trust, local clinical commissioning groups and community services.

- Service planning and delivery considered patients' needs, which meant changes to the service and how it was delivered benefited the patient. Support was in place for those patients and their families who had either learning disabilities or dementia type conditions. The trust had identified a lead nurse for dementia who was also a 'Dementia friends champion.'

- We observed good infection prevention practices by staff and noted good compliance in this area.

- Clinical equipment was serviced. Daily monitoring of resuscitation equipment had taken place. We observed that flooring in the theatre corridors was damaged and had been taped. Staff said that the entire theatre flooring was due for replacement under the planned maintenance programme during 2016.

- The national referral to treatment data (RTT) target trust performance fell below both the England average and referral to treatment standard. The 18-week RTT times for elective cardiac surgery were an issue as demand outstripped supply. The trust had focused on improving the delivery of RTT 18-week waiting times during 2015/2016. Additional funding was agreed and performance improved significantly from June 2015 onwards with delivery of 18-week compliance each month, except for December 2015. The backlog of patients waiting over 18-weeks had significantly reduced and plans were in place for 2016/2017 to reduce the backlog further. Service developments had also improved patients access to treatment.

Surgery

- Staff said that too many referrals and emergency patients' needs meant that referred patients operations were delayed. Delays in patient's transfers from the postoperative critical care unit to the wards occurred due to a lack of ward beds.

- The 'Home for Lunch' initiative was implemented trust wide to improve the timeliness of in-patient discharge from hospital by ensuring everything was in place for a safe and timely return to their place of discharge by 12 mid-day. Patients who met its criteria used the discharge lounge which opened in November 2015.

- The service was well led and a clear leadership structure in place. Individual management of the different areas were well led. Cultural work had taken place in some areas to strengthen the multi-disciplinary teams. Feedback from staff and patients had resulted in changes to aspects within the service.

Are surgery services safe?

Good ●

Surgical services at Liverpool Heart and Chest Hospital Foundation Trust (LHCH) were found to be good.

- Systems were in place to ensure incidents were reported, investigated and lessons learnt. Incident management was in line with 'being open' and the 'duty of candour.' 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.

- Equipment monitoring systems existed and clinical equipment was serviced.
- Operating theatres were established against the 'Association for Perioperative Practice (AfPP staffing recommendations.
- The surgical department had sufficient numbers of medical staff with the appropriate skills.
- Shortfalls existed in trained nurse levels, which were identified on the surgical risk register. Ongoing recruitment meant that vacancies were appointed into and these nurses would start working for the trust between May and September 2016. None of the staff we spoke with identified concerns about staffing levels.
- Care was provided in line with NICE CG50. Patient's risks were assessed to determine their fitness for surgery. The service had protocols and guidelines in place to assess and monitor patient risk in real time.
- Systems were in place to ensure that risks to elective and emergency patient groups were identified pre-operatively, for example, venothromboembolism (VTE) assessment was completed for all hospitalised patients within 24 hours of admission.
- Systems were in place to ensure that the '5 steps to Safer Surgery - World Health organisation' (WHO) surgical safety checklist was completed for patients prior to and following surgical intervention. The trust monitored completion of the WHO checklists and took action where checklists were not fully completed.

However we also found:

Surgery

- Shortfalls in mandatory training attendance.
- We were unable to ascertain whether all medical staff had completed adult safeguarding training, as training statistics for medical staff attendance were not provided by the trust.
- Shortfalls in nurse attendance at adult safeguarding training.
- Limited sepsis six training was available to nursing staff. The sepsis six is the name given to a bundle of medical therapies designed to reduce the mortality of patients with sepsis.
- We observed that flooring in the theatre corridors was damaged and had been taped. Staff said that the entire theatre flooring was due to be replaced under the planned maintenance programme during 2016.

Incidents

- Systems were in place to ensure incidents were reported, investigated and lessons learnt. Medical and nursing staff said they knew how to report incidents and had received feedback. Incident feedback was cascaded through email, staff meetings and during the ward daily safety huddles. Other forums in which incidents were discussed included governance meetings and speciality audit meetings.
- LHCH joined the 'Sign up to Safety Campaign' in January 2015. Incident reporting improved by 40% and was monitored through the 'Sign up to safety dashboard' available to all managers to share learning with their staff. Incident reporting was discussed in the patient safety group and the risk management committee, which were chaired by members of the executive team.
- The trust 'Incident Reporting Including Investigation and Root Cause Analysis Procedures (v2.5)' were in line with 'being open' and the 'duty of candour.' 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.
- Data from the 'Strategic Executive Information System' (STEIS) confirmed one never event and two serious incidents (SI) for surgery were reported at Liverpool Heart and Chest Hospital Foundation Trust (LHCH) from March 2015 to February 2016. We noted that the never event had been investigated internally and an independent review commissioned. A multi-disciplinary never event learning summit took place on the 27 November 2015. A human factors discussion on the 16 December 2015 recognised cultural issues as a factor and a decision made to roll out the HALT process in theatres to encourage staff to speak out from January 2016. Further discussions and updates regarding these events took place at the cardiac business meeting on 13 October 2015, and the surgery governance committee meeting on the 20 January and 18 March 2016 respectively. From the evidence, reviewed learning and changes had taken place to improve practice.
- Staff told us of how practice had changed and told us about the learning from one serious incident. Following the investigation, checks were implemented on the patient pathway and discussions now took place between the consultant and senior registrar before a patient was listed for surgery. A change in policy took place and patients records were subsequently re-audited for errors. Post investigation the trust spoke with the patient and their family about the mistake and provided verbal and written apologies.
- The surgical incident register recorded all incidents for all specialities within surgery. Incident dates were dated from 2 January 2015 to 31 December 2015. Each incident identified the incident description, actions taken, the incident manager and the date the incident was closed. Two of the incident themes included ongoing delivery of care including monitoring and review (79) and medication (76) incidents.
- Staff told us that feedback on incidents and safety alerts were circulated by email and the safety huddle.
- Mortality and morbidity review meetings is a forum where in-hospital deaths are reviewed. Mortality and morbidity (M&M) meetings took place bimonthly and were combined with an educational theme. We saw a selection of minuted speciality mortality and morbidity meetings. We were told that the learning from these meetings was disseminated within the team and throughout the trust.
- M&M was discussed at the mortality review group. Additional safeguards meant that a consultant not involved in the case reviewed the patient's records. Monthly meetings of the mortality review committee took place where learning was documented and action plans were produced and circulated to the rest of the

hospital. The staff we spoke with confirmed this. Staff said the topic of the last meeting was cardiac trauma and this meeting was attended by the regional trauma lead.

- Where a surgeon experienced mortality events, a period of mentoring was put in place which was reviewed quarterly.

Safety thermometer

- The NHS safety thermometer is a national initiative. A local improvement tool used to measure, monitor and analyse patient harm, and harm free care. The Care Quality Commission pre-inspection document for surgical services (March 2016) summary of analysis identified that three pressure ulcers were reported to the patient safety thermometer between January 2015 and January 2016. No falls or urinary tract infections in patients with a catheter were reported.
- The trust safety thermometer data for March 2016 confirmed that 98.8% harm free care was achieved.
- Trust audit data confirmed that VTE risk assessments on admission were consistently above target (95%) in 2015, except in September when they were 0.1% below target. From April 2015 to March 2016, the actual target achieved was 95.9%. For the same time scales, 92.4% of patients had 'appropriate VTE prophylaxis given.' We saw that from January to March 2016 improvements were made in VTE prophylaxis being given. We reviewed three patients VTE assessments that confirmed completion of these assessments on admission and review the following day. The clinical quality performance document to month 12 confirmed that provision of appropriate VTE prophylaxis for patients had improved and was compliant for March, work continued to improve in this area.

Cleanliness, infection control and hygiene

- Staff told us they could easily contact the infection control team, which meant appropriate professional advice was available.
- Staff throughout surgical wards and theatres observed good infection control practices. We observed the use of personal protective equipment, and hand sanitiser by staff. Hand sanitiser was located on entry to each clinical area and within clinical areas. Clinical staff were seen to be 'bare below the elbows' in clinical areas.
- Staff received infection prevention and control training as part of their induction and at yearly mandatory

training. The service training statistics (31 March 2016) confirmed 83% to 100% of nursing staff had completed infection prevention & control training. The clinical areas with training shortfalls were Oak ward (83%) and theatres (93%).

- Cleaning schedules were in place, which identified the tasks and frequency of cleaning in each area. Colour coded systems were seen to be applied to cleaning equipment used in different areas.
- Bi-annual deep cleans of theatre areas took place and the theatre matron undertook visual undocumented monitoring checks of cleaning in the theatre areas.
- Patient's pre-operative screening assessments prior to surgery included 'Multi resistant staphylococcus aureus' (MRSA) and Carbapenemase-producing enterobacteriaceae (CPE) screening. Staff said that when patients were admitted from another hospital the screening result was requested from the hospital. In the interim, protective measures were applied and the patient was placed in a side room and swabs taken.
- The infection protection and control (IPC) team confirmed the trust did not directly compare CPE infection data with other hospitals, instead regional infection data was reviewed by the IPC team.
- The surgical wound presentation infection surveillance at LHCH (June 2011 to September 2015) identified there had been 1% deep wound infections and less than 6% surface wound infections at the hospital.

Environment and equipment

- Equipment suitable for patients was seen in all clinical areas, for example, blood pressure machines.
- We checked some equipment throughout the service and saw 'I am clean' labels and stickers with dates confirming that maintenance checks had taken place.
- Resuscitation equipment on the surgical wards and theatres were in date and monitored. Resuscitation equipment was reviewed on the surgical assessment unit, theatres, cedar, elm, mulberry and oak wards.
- Appropriate measures were in place to maintain security. Security cameras were located throughout the building and people either had to ring a bell to enter the clinical environment or use password access.
- Prior to patient's appointments they could arrange to use a hospital wheelchair to assist mobility.
- Decontamination of surgical instruments was contracted out to an external contractor.

Surgery

- The medical engineering department serviced surgical equipment.
- Dietetic staff told us that they arranged patient's nutrition equipment prior to the patient's discharge to ensure the patient had the necessary equipment in place when they arrived home.
- We observed empty and full oxygen cylinders were stored in a corridor outside of theatres by the lab-cold blood bank. We raised this with the theatre matron who arranged for its immediate removal. The cylinders did not belong to theatres. Later during the inspection, we went back to this area and noted the oxygen cylinders had been removed.
- We observed some damaged flooring in the corridor areas in theatres. The damaged areas had been made safe by tape. The matron said that the flooring was to be replaced in 2016 through the hospitals general maintenance upgrade system.

Medicines

- Medicines management was in line with trust policy, for example medicines were locked in cupboards and patients individual lockers; the nurse in charge carried the controlled drug keys. Patients' drug charts throughout surgery were reviewed and no gaps seen against the entries.
- We observed that nursing staff wore a red tabard when completing a medicine round. The wearing of the red tabard was a visual indicator not to interrupt the nurse whilst completing the medicine round.
- The controlled drugs (CD) policy identified daily CD checks. We reviewed the CD books in theatres and the surgical wards and saw that daily checks of CDs had taken place.
- Drug fridge monitoring records were completed throughout the surgical areas we inspected.
- Nursing and medical staff received medicines training at induction. One nurse said they had supervised practice and completed a written assessment before being allowed to dispense medication. We requested medication management training statistics from the trust but none were received.
- The nurse in charge on Cedar ward (thoracic surgery ward) undertook missed dose audits daily. We saw an electronic audit record, which confirmed no missed doses on the 26 April 2016.

Records

- Computerised patient records were password protected. Staff said they had individual passwords to allow them to access patient information.
- We reviewed a mixture of six sets of medical and nursing notes. The types of documentation seen included completed pre-operative assessments, pre-operative checklists, risk assessments and consent documentation.
- In patients records we saw evidence of ongoing care and treatment reviews documented in doctors daily e-notes, which contained instructions for nurses. Physiotherapists plans with milestones, which were shared with the patient and nurses daily assessment notes.
- Risk assessments were completed in the one of the sets of patient's records we reviewed. The types of assessments included: pressure ulcer, falls, MUST. For each of these assessments rescreening was completed at the identified screening frequency.
- Patients care plans reflected their needs, were reviewed and seen to link with the patients risk assessments.
- In line with the Royal College of Surgeons 'Good Surgical Practice (2014)' staff told us that pre-operatively patient concerns and / or needs were discussed within the multi-disciplinary team at the patient's pre-admission visit. For example, a patient with safeguarding needs or complex needs was identified prior to surgery so that the necessary support could be identified for that patient.

Safeguarding

- A trust safeguarding team advised on adult safeguarding concerns. The team included a lead nurse for patient and family centred care and safeguarding. Support was also provided for patients with additional and/or complex needs whilst under the care at the hospital or in the community. The lead nurse worked with patients and families to develop plans of care in order to fully meet their needs. This included support for people living with dementia, a learning disability, autism spectrum conditions, patients with physical disabilities and patients with mental health and capacity issues.
- Staff said the safeguarding team could be accessed by telephone for advice and described effective working relationships with the local adult safeguarding teams and other healthcare professionals such as social workers and community nursing staff.

Surgery

- Safeguarding reporting arrangements were in place to ensure that safeguarding processes were monitored trust wide.
- Safeguarding guidance was accessed by staff through the trust intranet, for example, Safeguarding adults (March 2013), domestic abuse policy (April 2015), forced marriage guidance and a draft Mental Capacity Act 2005 (v1) policy.
- Staff demonstrated knowledge of the safeguarding guidance to follow, what to do and who to contact should a concern be raised.
- Staff told us that concerns about safeguarding issues were also recorded on daily safety huddle documentation so that staff were informed of current issues.
- Staff confirmed completion of adult safeguarding training at trust induction and during yearly online mandatory training sessions. The trust-training target for three yearly safeguarding training attendance was 95%. Training statistics for surgery dated 31 March 2016; identified 83% to 100% of nursing staff had completed the adult safeguarding training session 'A'. Whilst, there was between 47% to 86% attendance by nursing staff at the safeguarding 'B' training session. In addition, 100% of nursing staff had completed level two safeguarding children training.
- We requested safeguarding training statistics for medical staff however these were not provided.

Mandatory training

- We spoke with members of staff of all grades, who confirmed they had received a range of mandatory training and training specific to their roles, for example, incident reporting, resuscitation, manual handling, infection control, and safeguarding.
- Internet based mandatory training included training sessions in fire safety, basic resuscitation, Mental Capacity Act and deprivation of liberty; these were completed yearly by staff. In addition, other core mandatory training sessions included; information governance, equality and diversity, conflict resolution, infection prevention control, manual handling theory and pressure ulcer.
- The trust target for mandatory training compliance was 95%. The information received from the trust identified training attendance compliance levels by staff for individual training courses. A training summary dated 31 March 2016 identified that training compliance across

the training courses ranged from 47% (Safeguarding B module – Cedar ward) to 100%. The clinical areas with the highest levels of training non-compliance were Oak ward and Theatres.

- Training statistics provided by the trust confirmed that 89% to 100% of nursing staff had completed basic life support training. In addition, 100% of the 12% of nurses required in theatres had completed adult advanced life support training.
- Nursing staff told us they had completed intermediate life support training on induction as well as having repeat simulation training sessions face to face with a trainer. One nurse said they had completed simulation training that morning.
- Senior medical staff said that all junior and middle grade doctors had completed advanced life support training.
- We were told that staff could access sepsis six training through the trust mandatory training programme. A specific session was not identified for sepsis six training on the mandatory training information. Since November 2014, all junior doctors had received sepsis training as part of their trust induction program. Senior trainees and consultants received updates, audit data and recommendations during audit days. This was last presented at the 'Surgical Audit Day' on 18 February 2016. On 8 April, a sepsis training session was delivered to 16 members of critical care nursing staff and on 13 April to eight members of ward nursing staff.

Assessing and responding to patient risk

- The service identified guidelines and protocols to assess and monitor patient risk in real time, and react to changes in risk level.
- The trust said all surgical services were consultant-led and cases reviewed either by a consultant surgeon or consultant anaesthetist as standard practice irrespective of preoperative mortality risk. All procedures were overseen by the consultant team.
- The surgery risk register (undated) identified a residual risk score of 12 in relation to inadequate compliance with the sepsis care bundle. Internal assurance processes included a 'sepsis order set compliance audit.' Senior staff said non-compliance with the sepsis care bundle was identified on the risk register due to a data entry issue as the patient's antibiotics and treatment were documented retrospectively on the patient's electronic patient record (EPR). This meant a

time delay between when the treatment was given and recording it on the system. Currently, discussions were ongoing with the EPR team to resolve this issue. Senior staff told us that currently the first dose of antibiotics was given within three hours of sepsis being identified. We saw this was against the trust 'Sepsis protocol (v1.1, 30 March 2016)' which identified that antimicrobial therapy be initiated within one hour. The trust had implemented an action plan about improving sepsis treatment.

- The trust had achieved 100% compliance in the delivery of antibiotics to patients with sepsis within three hours. The trust identified this was in line with the 'Surviving Sepsis Campaign guidelines' and the awaited NICE guidelines due to be published in July 2016. Both documents recommended delivery of antibiotics within three hours for patients with sepsis and one hour for patients with severe sepsis.

- We saw that risks to patients were initially identified during their initial assessment by staff and these needs identified within care plans and risk assessments.

- The modified early warning score (MEWS) is a tool used to monitor patients who may be at risk of deterioration by grading the severity of their condition and prompting nursing staff to ask for a medical review at specific trigger points. Staff told us that if a score of three or above was triggered this was escalated to the medical staff and nursing outreach team. We reviewed two patients MEWS scores, which confirmed escalation, had taken place. For example, one patients MEWS on Elm ward was originally scored a one at 08:52 hours. We observed when the score increased to four the doctor, nurse in charge and outreach team were informed and a red flag appeared on the patient's electronic records.

- Staff completed the '5 steps to Safer Surgery - World Health organisation' (WHO) surgical safety checklist for patients prior to and following surgical intervention. We reviewed two patients' surgical safety checklists and saw they were fully completed on-line in the patient's electronic notes. The staff involved were seen to stop, listen and were engaged in this process.

- The 'WHO Safe Surgery Checklist Audit (Nov 2015-Jan 2016)' was discussed at committee on the 12 February 2016 where compliance was identified as between 89.5% to 93.5%. They identified no specific area resulted in not achieving full compliance. To ensure compliance the following measures were in place; raise awareness at the daily safety huddle, attend each theatre to remind

staff of the importance of full completion, educate staff that had not complied with the standard on more than one occasion, and work with electronic patient's record team to review the system and display a weekly compliance graph outside sister's office.

- The assurance target for the WHO checklist was set at 90%. A WHO safe surgery checklist observational audit in February 2016 identified 77% compliance. Another daily WHO checklist audit dated the 1 April 2016 to 18 April 2016 showed gaps in the completion of the WHO checklist. The action plan identified the issues and confirmed that immediate responses and staff accountabilities to the issues were put in place.

- Senior staff identified theatre recovery staff did not receive level three critical care training as a mandatory training requirement.However the trust confirmed that level three patients are not recovered in theatre recovery all level three patients are transferred directly to POCCU. A level three patient is a patient who required advanced respiratory support alone or basic respiratory support together with support of at least two organ systems.

- Interventional radiology services were located at another Liverpool hospital and were easily accessed.

Nursing staffing

- Staffing was identified in the risk registers for wards within surgery due to difficulties recruiting appropriately trained members of staff.

- Biannual staffing reviews had taken place to monitor staffing levels; the last staffing review took place in December 2015.

- To mitigate risk there were rolling monthly adverts to recruit band 5s (trained nurses). The last in-house recruitment open day took place in October 2015 to recruit staff to different disciplines. In addition, targeted recruitment took place with the armed forces for staff wanting to join the NHS.

- A review of models of care has resulted in band four staff supporting a team of patients under the supervision of a trained nurse. Ward managers had also become part of the ward numbers to remain clinically credible whilst working alongside their staff and leading by example.

- Senior staff told us that the staffing followed NICE guidelines SG1 and staffing escalation guidance ensured safe staffing levels. Staff described the staffing

Surgery

escalation route taken from ward level, to 24-hour hospital co-ordinator support and out of hours hospital management support. Staff said that generally situations were dealt with at hospital co-ordinator level.

- Daily flow meetings had taken place at 9am (Monday to Friday) where staffing was reviewed and moved according to occupancy and acuity. The safety huddle held in CEO office daily (Monday to Friday) identified concerns to patient or staff safety. Heads of nursing were informed of concerns to ensure that support and escalation took place.

- The staffing acuity tool used to inform staffing levels within surgical wards was the 'Association of United Kingdom University Hospitals' (AUKUH). The surgical wards bi-annual assessments included data collection over 21 days by the ward manager or nurse in charge. The review in December 2014 resulted in an uplift to the surgical staffing establishments for theatres, Oak ward and Cedar ward. In addition, monthly staffing returns were completed which confirmed compliance against planned staffing for the month.

- The professional judgement model was also used and analysed in accordance with the key performance indicators of the ward, for example, turnover, sickness, mandatory training, Friends and Family test (FFT) results and comments. The planned ratios of nurses per patient were; Cedar 1:4, Elm 1:4 and Oak 1:5.

- The 'LHCH Monthly Staffing for Reporting Period for April 2016 trust board report' stated 'All shifts were reported as safe during the month however there were 10 shifts with red flag concerns noted for Mulberry ward due to not having 2 registered nurses on each shift. Safety was not compromised as at no time was the registered nurse responsible for more than eight patients'. Following this paper extra staffing for registered nurses on Mulberry ward was to be considered as part of annual planning for 2016 /17.

- The trust followed guidance on theatre staffing as directed by the AfPP (Association for peri-operative practice) guidelines. Vacancies within the theatre department were covered by bank and agency staff to ensure that the department was compliant and patient care safe. Theatre agency usage was block booked to ensure staff were proficient and competent in their skills. Discussions with the theatre matron identified that due to staff recruitment the temporary staff used would soon not be required.

- Each surgical area had an identified funded staffing establishment and staff rotas produced through the electronic e-rostering system.

- Trust staffing data for December 2015 confirmed 472 nursing staff (planned staff 523) at band seven and below in post and the highest nursing vacancy factor remained on Cedar ward.

- There were 18.72 actual nursing staff at band eight and above. Planned staffing for this group was 22 staff.

- The trust provided a 'number of staff snap shot' audits for February 2016 against each surgical area and theatres, which confirmed nursing vacancies of between 0.6 and 13.5 wte staff.

- The trusts staffing whole time equivalent (wte) data for the surgical wards and theatre showed shortfalls of between one to ten nursing staff against ward establishments. In the interim these staffing shortfalls were manged through the use of bank and agency nursing staff. Cedar ward had the highest vacancy factor of ten nursing staff. Staff told us that band five staff vacancies on Cedar ward were appointed into and new staff due to start at the trust from May to July 2016. In addition, the ward manager worked Monday to Friday and four assistant practitioners had recently started on Cedar ward.

- The staffing incident log identified 34 incidents reported in the last six months. We observed that 13 of these incidents had taken place on Cedar ward, the ward identified as having the highest vacancy factor. Senior staff said no harm had come to patients on those shifts.

- Staff told us that seven advanced nurse practitioners had been appointed; five were currently completing the advanced nurse practitioner course.

- Staff on Oak ward said they felt staffing was adequate and safe. Staff said they reviewed patient acuity and patient's enhanced care needs at each shift and requested additional health care assistant(s) if needed. On Oak ward new staff were due to take up posts from July to September 2016. Staff on the other surgical wards we visited also identified safe staffing levels.

- We reviewed Oak wards nursing rota for week commencing 24 April 2016 and saw that a band five or six nurse was in charge and the ward manager (band seven nurse) was supernummary. The ward manager said band six nursing cover was identified on the nursing rota when she was on leave. We noted band six cover in place for week commencing 2 May 2016 when the ward sister was on leave.

Surgery

- Mulberry ward was closed during our inspection. We were told this was because of staffing shortfalls so Mulberry staff were redeployed to other surgical wards as an interim measure. Staff told us of plans to reopen the ward on the 4 May 2016, as this was when there would be sufficient staff employed. Current staffing shortfalls meant the ward manager took a patient caseload when the ward was open and staffing levels on night duty comprised of one band five nurse and one healthcare assistant. Senior staff said they were currently reviewing staffing skill mix on Mulberry ward so that a band six nurse would be included in the existing nursing skill mix.

- A nursing outreach team based on Elm ward comprised of three band six and seven nurses. The outreach team worked Monday to Friday until 8pm. Staff said the team provided advice and followed and monitored patients who were moved from the intensive care unit to the wards. The team reviewed patients' observations, completed blood gases and blood cultures when needed and commenced the sepsis six-treatment bundle when needed.

- Staff said all staff including temporary staff completed inductions to the clinical areas. However, there was not a specific induction checklist for use when bank or agency staff worked on the clinical area for the first time.

- Nursing sickness rates within the surgical areas ranged between 1.11% (80 whole number absence) and 4.40% (383.2 whole number absence) from April 2015 to February 2016. The area showing the highest nursing sickness levels was Cedar ward.

- Bank and agency usage for the four surgical wards from April 2015 to March 2016 ranged from 0.0% for August 2015 on the surgical admissions unit to 22.8% in June 2015 on Elm ward. In March 2016, agency and bank usage ranged from 14.7% on the surgical admissions unit to 17.9% usage on Elm ward. However, 12-month averages for each surgical ward showed that Oak ward had used the highest percentage of agency and bank staff at 16.5% from April 2015 to March 2016. The 12-month average for Cedar and Elm ward showed usage as 13.8% and 13% respectively.

Surgical staffing

- The surgical department had sufficient numbers of medical staff with appropriate skill's to ensure that patients received safe care. Staff told us that staffing levels in theatre were good.

- Health and Social Care Information Centres (HSCIC) statistical data from September 2004 to September 2014 showed that the proportion of consultants was 51% compared to the England average of 41%; middle career doctors were 4% compared to the England average of 11%. The registrar group was 39% compared to an England average of 37%, whilst the proportion of junior doctors at the trust was 6% compared to an England average of 12%.

- Trust staffing data dated December 2015 confirmed planned medical staff – consultant or equivalent grade as 74.00 and of this 73.89 whole time equivalent (wte) consultant staff were employed. Staff said two consultants were due to start at the trust in July 2016.

- Trust staffing data for December 2015 confirmed planned medical staff – other grades which included doctors in training was 74 wte. Actual staff in post was 64.50 wte.

- Staff from the cardio-thoracic areas identified 17 speciality grades (tier 2 level) posts from these, two vacancies were to be appointed to. The junior trainees or tier 1 level doctors totalled 20 doctors. All middle grade and surgical junior doctors worked shifts.

- Weekday cover on the wards was provided by the various teams doing routine morning ward rounds. Two tier one doctors staffed the surgical wards; one carried the on-call tier one bleep until 8.30pm, including handover time. Four advanced nurse practitioners provided additional support.

- One tier one doctor provided weekend day and night time cover for the surgical wards. Staff told us that after 8pm two middle grade doctors provided the on-call service, one in the critical care unit and one on the wards and in theatre.

- Weekly on-call staffing rotas were in place in theatres which identified individuals to contact for specified areas, for example, Cath lab, anaesthetist and scrub nurse. The operating department practitioner was resident at night.

- There was a consultant surgeon of the day; however, most surgeons reviewed their patients on the wards, the intensive care unit and critical care unit as necessary. Three surgical consultants were on call at all times, one for cardiac surgery, thoracic surgery and aortic surgery.

Surgery

- The thoracic team completed daily ward rounds and evening patient handovers and consultant ward rounds took place at weekends. Three patients we spoke with throughout the service corroborated the daily ward rounds, which had taken place.
- The surgical risk register identified a residual risk of nine to the service due to the lack of perfusion staff in theatres. We met with staff that identified staffing had been a problem but staff had been recruited into the perfusionist role and there were now a full complement of staff. By August 2016, there would be 12 perfusion staff.

Major incident awareness and training

- Action cards for each clinical area supported the major incident plan (version 1.2, 24 August 2015). Heads of Departments and senior staff are responsible for taking a tactical command role during an incident responding to direct instruction from the trust incident control team (TICT) or by the implementation of appropriate action cards. The major incident room was located in the heads of nursing office within the executive floor of LHCH premises.
- The major incident plan (appendix three) detailed the procedures to be implemented should a major incident or a HAZMAT (Hazardous Materials) / C.B.R.N.E. (Chemical, Biological, Radiological, Nuclear, Explosives) incident occur.
- Liverpool Heart & Chest Hospital (LHCH) business continuity strategy and plans were used in conjunction with the major incident plan.

Are surgery services effective?

Good ●

We judged the effectiveness of the surgical service as good.

- The service provided evidenced based care as identified within evidenced based clinical guidelines. Monitoring of clinical guidelines had taken place.
- Care was provided in line with NICE CG50.
- The trust identified that they met the majority of the 'Core Standards for Pain Management, Faculty of Pain Medicine'.
- The trust was confirmed that LHCH surgical services met the 'NHS England seven day services priority standards' around 'Time to first Consultant review.'

- Patient's surgical outcomes were monitored and reviewed through formal national and local audit. Auditing systems had informed practice, introduced changes and lessons learnt to improve outcomes for people.
- Patients received care and treatment by trained, competent staff.
- Corporate and local induction processes were in place for new staff.
- Evidence of multi-disciplinary team working was observed.

However we also found:

- Hospital episode statistics (HES) from August 2014 to July 2015 identified negative findings in relation to the relative risk of emergency readmission for elective admissions in cardiac surgery and upper gastrointestinal surgery. In addition, the relative risk of emergency readmission for non-elective admissions identified cardiac surgery emergency readmission rates as higher than the England average of 100 at 114. Trust meeting minutes confirmed readmissions were being monitored through trust performance and governance forums.
- Appraisals were not completed for all nursing staff in 2015/2016.
- Medical trainees had limited access to human factors training and simulation training, whilst, cardiac training opportunities for medical trainees was variable.

Evidence-based care and treatment

- The service contributed to the 'National Cardiac Benchmarking Collaborative' (NCBC) and to national standards.
- Staff identified that the national lung cancer audit showed resection rates as high and mortality rates higher than expected. This data was reviewed and found to include pneumonectomy (removal of the lung) data as well. Once this data was removed, the remaining data was within range. The 'National Lung Cancer Audit' action plan updated in April 2016 identified recommendations for data completeness and quality, process of care and clinical outcomes. We observed all but two areas were achieved. The area identified as not known proposed actions were completed. The trust said

Surgery

a data review was underway to explore the reasons for current performance (second area) and that data anomalies were being explored with 'Somerset Cancer Register.'

- The trust self-assessment checklist to review the recommendations taken from the 'First patient report of the National Emergency laparotomy Audit (June 2015)' identified 24 recommendations with timescales from March to June 2016. The action plan updated in February 2016 confirmed nine areas, which required no intervention, and nine areas partially compliant or further information required to make a judgement. Six areas were identified as not met. The trust did not supply any additional information to confirm progress made for those recommendations identified with March 2016 timescales.

- Risk adjusted in-hospital survival rates for adult cardiac and thoracic surgery by surgeon (April 2011 – March 2014) were all within expected range, 96.5% to 98.9%.

- Guidance the Royal College of Surgeons and the National Institute for Health and Care Excellence (NICE) informed care.

- Care was provided in line with NICE CG50. This guideline identified measures staff took to recognise and respond to deterioration in patient's conditions. We saw staff monitored the patient's progress throughout their journey from pre-assessment to the post-operative stage. Baseline physiological observations including respiratory rate, heart rate and temperature were taken at pre-assessment followed by agreed frequencies of physiological observations at the patient's admission through to discharge home. An 'early warning score' was used to detect deteriorating patients and escalated deteriorating patients through the escalation framework.

Pain relief

- The pain team comprised of two consultants and two nurses (1.8 whole time equivalent) at band six and seven who were contactable by bleep for advice. No pain consultant was onsite on Tuesdays and Thursdays. An on call resident anaesthetist and two intensivist anaesthetists provided support in the out of hour's period.

- The core pain service was provided Monday to Saturday from 8am. Additional provision until 7pm was provided

on two evenings. The team were supported by pain link nurses from each clinical area and advanced nurse practitioners (ANP). We saw copies of previous ANP rotas dated October and December 2015.

- Quarterly pain team meetings took place with the lead pain consultants. Nurses within the pain team identified they were involved in all changes within the pain service.

- Staff said the service mostly met the 'Core Standards for Pain Management' as identified by the Faculty of Pain Medicine'.

- Pre-assessment nurses identified patients who required additional pain management support.

- The pain team completed daily ward rounds for thoracic patients and one weekly ward round were attended by the pain team's consultants.

- An e-referral system was used to request the pain team input into patients care pre and postoperatively. Cardiac patients were seen following an e-referral for pain management support.

- The target to see urgent referrals within two hours was achieved with the exception of one occasion at a weekend when the team were not informed.

- We tracked two surgical patient's pathways; part of the pathway related to pain management. We observed pain management discussions took place with the patient prior to and post-surgery. Patients told us their pain was well controlled post operatively.

- Staff identified pain management protocols were in place for cardiac patients.

- New staff received face-to-face training on pain management at induction; the topics included the use of pain relief medication, complications and side effects. Pain devices and pain monitoring processes. Staff also told us that improvements were required to make pain management training more accessible and available.

- Staff told us of training on the safe use of devices used to control pain in patients, for example, patient controlled analgesia pumps and epidurals was completed by staff prior to the staff member setting up these devices. As a safety feature, safety codes were entered into pain devices to prevent use by untrained staff.

- Pain link nurses from the clinical areas communicated developments in pain management and were key trainers for devices.

- Patient satisfaction was monitored through newly introduced snap shot audits, quarterly recovery audits

Surgery

completed in 2015 and three-yearly patient satisfaction audits. Staff identified a positive outcome from the December 2015 pain satisfaction audit where views from 41 thoracic and 36 cardiac patients confirmed 87% satisfaction with the pain relief they received.

Nutrition and hydration

- A dietetic service was provided to all inpatient surgical patients. The team was led by a band seven nutrition support specialist who was supported by one whole time equivalent (WTE) specialist nutrition support dietitian and 0.4WTE specialist nutrition support dietitian (this post was currently vacant but out to advert).
- Registered nurses identified and referred patients who required dietetic support.
- Patients admitted to hospital were screened using the 'Malnutrition Universal Screening Tool' (MUST). A dietitian saw patients with MUST scores of two or more.
- Staff told us that once the MUST score was two or above, the patient was identified by a red tray and red top jug. This served as an indicator of patient risk and informed staff that assistance may be required with meals and drinks.
- The trust identified ongoing monitoring of patients MUST scores was in place. The surgery division governance committee meeting (18 March 2016) identified MUST risk assessment as 98% for December and 98% year to date.
- A variety of food choices was available to patients. Special diets, for example diabetic, gluten free, textured and allergy diets were available. We spoke with ten patients and one patient's partner about the food provided at the hospital. All but one of the patients identified satisfaction with the foods provided; one patient described the food as 'outstanding' and identified that it 'had 'less than 15% fat.' In addition, there was a drinks round four times daily.
- Patients, carers and staff could access a café, restaurant and vending machines.
- On Cedar ward, a nutrition board was in the ward kitchen, which identified patient's needs and diets including those patients who required help at mealtimes.

- Staff told us that 'protected mealtimes' had been introduced. Protected Mealtimes are periods on a hospital ward when all non-urgent clinical activity stops. During these times patients are able to eat without being interrupted and staff can offer assistance.
- The trust confirmed that dietetic discharge departmental guidelines identified a written handover must be provided to the patients on-going care provider. For example, the patients GP or local hospital or community dietetic services. The trust said this was audited annually and showed 100% compliance.

Patient outcomes

- Theatres at the trust were not used at more than 98% utilisation. Monthly theatre utilisation varied between 25% and 98% from September to November 2015. (Liverpool Heart and Chest Hospital Foundation Trust data pack, March 2016) The lower level percentage was due to the theatre being used for non cardiac patients requiring specific treatment for a short period of time.
- The trust said they did not participate in the Anaesthesia Clinical Services Accreditation Scheme (ACSA) scheme as ASA grade for emergency cases had limited use as a decision making tool for cardiothoracic surgical patients. The trust said ASCA for specialist cardiothoracic services had not yet been launched; it is only for general departments. The clinical lead for anaesthetics had attended an assessor's day at the Royal College of Anaesthetists last year and offered for LHCH to be a pilot site. Cardiac surgery and thoracic surgery were both consultant led services and as such, all emergency patients were individually assessed by both the consultant surgeon and consultant anaesthetist, which included an individual risk assessment.
- The National Laparotomy Audit (2105) identified a mixed result for LHCH with three out of 11 indicators achieving 70 – 100%. Five indicators achieved a red status 0 to 49%. Data was unavailable in relation to consultant surgeon review under 12 hours of emergency admission and for final case ascertainment.
- The Lung Cancer Audit (2015) identified 93% of 376 patients were discussed by the multi-disciplinary team, whilst 24.5% of patients received surgery. The England averages were 93.6% (discussed at MDT) and 15.4% (received surgery). The Liverpool lung cancer unit was run with the Royal Liverpool and Broadgreen University Hospitals Trust.

Surgery

- The relative risk of emergency readmission for elective admissions in the top three specialities, cardiac surgery, thoracic surgery and upper gastrointestinal surgery confirmed that two specialities cardiac surgery (106) and upper gastrointestinal surgery (130) readmission rates were higher than the England average of 100. We saw meeting minutes, which confirmed readmissions were monitored through trust performance and governance forums.
- The hospital episode statistics (HES) data confirmed thoracic surgery readmissions were below the England average of 100. A score below 100 indicates a positive finding, whilst a score above 100 represents the opposite. (HES – August 2014/July 2015)
- The relative risk of emergency readmission for non-elective admissions in the top three specialities, cardiac surgery, thoracic surgery and upper gastrointestinal surgery confirmed that cardiac surgery emergency readmission rates were higher than the England average of 100 at 114. A score below 100 indicates a positive finding, whilst a score above 100 represents the opposite. (HES – August 2014/July 2015)
- The trusts survival rate for all types of surgery was 97.5% from April 2011 to March 2014. None of the trusts surgeons had a survival rate more than 1.6 percentage points lower than the overall trust rate. (Liverpool Heart and Chest Hospital Foundation Trust data pack, March 2016)

Competent staff

- A six-month rotation programme was available for band five staff. Since 2015, 46 nursing staff were recruited to the rotation programme, which linked to a mentorship programme.
- Since 2010, LHCH has provided all newly qualified nurses with an organisational specific preceptorship programme including cardiothoracic specific skill and competency development.
- Staff were trained in the speciality of the ward they worked and competencies completed at ward level. This was confirmed by some staff who told us they had completed endoscope competency assessments to enable them to work in the scope room. Three staff we spoke with said they felt their training needs were met.
- The trust identified that additional support was provided to areas in the development of cardiothoracic competencies through the centralised clinical practice educator based in the education team. Since 2014,

LHCH had offered staff the opportunity to complete speciality degree level modules, for example, the BSc. in Cardiothoracic Practice and supporting modules: HEA 3033 (Cardiothoracic Critical Care) and HEA 3172 (Management of Cardiothoracic Events within Critical Care).
- Six staff on Elm ward had completed the cardiothoracic module, delivered by trust clinical educators. The ward manager said that all registered nurses had the opportunity to complete this course.
- The trust told us that registered nurses who had been in post for several years had completed different anaesthetic courses (Diploma in operating practice ENB176, ENB 182 Enhanced practice, BSc in peri-operative practice, Warrington airway management courses, Aintree difficult airway management course and anaesthetic courses at Edge Hill University) which had elements of recovery, post-operative and anaesthetic competencies in them.
- The trust said staff had rotated between different areas within the theatre department and had undertaken competencies. We were told that 100% of operating department practitioners who worked in recovery had completed recovery training as part of their university training. New staff completed in house competencies for anaesthetic and recovery and pacing and were signed off by their mentors before they acted independently in recovery.
- The 2015/2016 appraisal data provided by the trust for the surgical areas confirmed between 68% to 100% of nursing staff on the surgical wards and in the theatre areas had received appraisals. The lowest areas for completion of appraisals were theatres at 68% and Mulberry ward at 86%. Staff told us that the yearly appraisal process was useful.
- The trust confirmed that all surgeons had an appraisal in 2015-2016 except two associate specialists (surgeons). The appraisals were relevant to the period April 2014 – April 2015 but the vast majority had an appraisal during the time in question.
- Staff told us corporate and local induction processes were in place for new staff and support was received from local staff. One band five nurse confirmed their local induction included a supernummary period on the ward and completion of a period of preceptorship where they completed additional training sessions and tests.

Surgery

- Staff told us clinical supervision was available to nursing staff on request. The trust identified that clinical supervision was highlighted by ward managers to staff during safety huddles and team meetings and it was also offered following any traumatic or stressful incidents that have occurred in the ward environment. The Clinical Supervision process is well embedded in in the 'Allied Health Professions (AHP)' departments and also within the Critical Care Unit where both regular 1:1 supervision sessions and group supervision sessions took place. The process received good evaluation from staff who had accessed it, stating it is a valuable support especially when they had faced challenging situations. Other staff had accessed clinical supervision to discuss ways in which to embed good practice.
- Senior staff said new medical staff attended the corporate induction, completed mandatory training and, electronic patient record training. In addition, all junior and middle grade doctors were given cardiac and thoracic surgery survival guides. We saw three two-day doctor induction programmes, which took place from August 2015 to February 2016. The teaching sessions included sepsis management, resuscitation, consent and venothromboembolism (VTE). In addition, online training sessions were identified for completion. We were told that human factors or simulation training was not available.
- Teaching programmes available for middle grade and junior doctors (tier one level) included two three-month programmes, which covered cardiac cardiothoracic sessions. Staff told us that journal clubs started two-months ago which alternated between consultant teaching sessions.
- Middle grade and junior doctors were allocated clinical and educational supervisors.
- A discussion with four medical staff identified thoracic training was good. However, cardiac training opportunities were variable, as some cardiac surgeons did not provide training for junior staff.
- Medical staff said they spent 30% to 40% of their time looking after post cardiac surgical patients; however, they had not received any teaching or training on this. The lack of training for medical staff could potentially impact on patient care should a doctor not be fully aware of the treatment pathway for the patients condition.

- Senior staff said that six monthly educational assessments were completed with each trainee doctor. These assessments assessed the trainee's knowledge base and competency.
- Trainee doctors rotated between the Liverpool Heart and Chest hospital and other local hospitals to enhance their skills and knowledge. Wet lab facilities were at another hospital due to a lack of these facilities onsite.

Multidisciplinary working

- Patients records identified their care was reviewed daily by senior clinicians at the daily ward round.
- Patients records showed that the multi-disciplinary team (MDT) were involved in patients care and treatment plans.
- Staff identified that daily 'safety huddle' MDT meetings had taken place with members of the multi-disciplinary team present where issues such as incidents and safeguarding issues were discussed.
- Doctors and nursing staff told us they worked well together.
- Dieticians and physiotherapists said they attended multi-disciplinary meetings.
- Occupational therapists and physiotherapists attended weekly patient discharge meetings.
- Ward link nurses worked closely with the end of life care team and chaplaincy to ensure that patients at end of life received the necessary support and care they required. The ward link nurse acted as a resource regarding end of life care to other staff on the ward.
- Surgeons and anaesthetists met bimonthly at formalised audit meetings to discuss patient cases.
- Surgeons and cardiology consultants met quarterly to discuss patients.
- Weekly cardiac and thoracic MDT meetings took place. The MDT coordinator records decisions made at these meetings.
- One to two weekly cardiac speciality meetings took place, for example, coronary (x2 weekly meetings) and mitral (x1 weekly meeting) weekly.
- Weekly cancer MDT meetings were held on Friday mornings and were led by a named doctor. The oncology hospital sent a representative to ensure an oncologist opinion was incorporated into MDT discussions and the correct treatment options considered for each patient discussed. The meeting

used the 'Live Somerset Cancer Registry System' to review patients and document actions within the system, negating the need for physical minutes of the meetings held.

Seven-day services

- We asked the trust whether Liverpool Heart and Chest Hospital Foundation Trust (LHCH) surgical services met the 'NHS England seven day services priority standards around 'Time to first Consultant review and were told this target was achieved.
- Theatres, including anaesthetics and recovery had staff on duty out of hours to cover emergencies.
- Physiotherapy staff were ward based and followed patients through their treatment pathway. A physiotherapist was on site from 8am to 16:15pm Monday to Friday. At weekends, an on-call service was available from 8am to 16:30pm and at nights.
- Staff confirmed effective multi-disciplinary team (MDT) working throughout the service and with external stakeholders. Doctors, pharmacy support and radiographers were easily accessed out of hours.
- Patient investigation results were accessed easily, for example, the online patient x-ray (PACs) system provided staff with details of the patients x-rays pre-operatively.

Access to information

- Staff identified examples of how information was shared amongst the multi-disciplinary team. For example, where patients required support in the community a fax was sent to the community nursing team prior to the patients discharge. The patient also had a copy of this referral letter to take on discharge.
- The patients GP received email notification, which detailed information about the patient's procedure and treatment.
- Physiotherapy and occupational referrals informed specialists of patients' needs in hospital and prior to discharge.
- The discharge team worked closely with other health care professionals to ensure they have the necessary information so that the necessary arrangements were made for the patient prior to their discharge home or to another healthcare provider.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- Staff identified different consent forms were used to obtain patient consent. The consent forms used were dependent on the following factors: the type of procedure, the patient's ability to consent, for example, patients with dementia type conditions or learning disabilities and for patients whose consciousness was not impaired.
- Staff said patients with dementia type conditions were generally supported through the consent process by their relatives.
- A Deprivation of Liberty Safeguards policy (v1, 29 January 2016) was available for staff to access.
- Discussions with three post-operative patients confirmed they had signed a consent form and were informed of what to expect during the preoperative period and following surgery. We reviewed two patients consent documentation and saw that it was signed and dated and the risks explained prior to surgery.

Are surgery services caring?

Good 🟢

We judged caring as good as the service provided caring services to the local population.

- Patients received compassionate care with good emotional support.
- Patients were fully informed and involved in decisions relating to their treatment and care.
- The multi-disciplinary team provided support during the patient's admission, stay and in preparation for their discharge home.
- Patient's emotional needs were supported throughout their surgical experience.

Compassionate care

- We spoke with 10 patients and two patient's relatives and / or partner who told us they were happy with the care and support received. One patient on Elm ward described staff as being 'on the ball', call bells answered immediately and described the hospital as ''the best hospital I've been in.''
- All the patients we spoke with spoke highly of the staff throughout the service and the care they received.

Surgery

- Throughout our inspection, we observed members of medical and nursing staff provide compassionate and sensitive care that met the needs of patients. Staff had a positive and friendly approach and explained what they were doing.
- Feedback cards and comment boxes were available throughout the service. We saw patients had given positive feedback about their experiences on the cards displayed in ward areas.
- The trust performed well in the 'Friends and Family Test' (FFT) from February 2015 to January 2016. Response scores for the three surgical wards, Cedar, Elm and Oak wards identified total responses between 417 (Elm ward) to 640 (Cedar ward). The 12-month response rate for these three wards ranged from 94% to 100%. The trust identified four actions resulted from the FFT. The results were discussed at the surgical governance committee and locally with staff. The June 2015 audit action plan confirmed all four actions were completed. The outcome of this audit was presented at the trust quality committee on the 17 November 2015 and during team brief on the 27 May 2015.
- The Care Quality Commission in-patient survey (2013 – 2014) identified the trust was a better performing trust in five areas and about the same as other trusts in the 'leaving hospital' questions. This related to performance trust wide, not just in surgery. The 'NHS National Patient Survey Results 2014' were discussed at the trusts quality committee. Records we reviewed confirmed that discussions included the actions taken and areas identified for improvement.

Understanding and involvement of patients and those close to them

- The 'Care Partner Programme' supported people to become involved in their relatives care in hospital. During this process, staff explained to relatives how much care they could safely be involved in, any limits or restrictions because of their relative's illness and infection control procedures, such as hand washing they needed to undertake.
- Staff from Elm ward told us they introduced a new role through the 'Total Care Practitioner' pilot. The healthcare assistant undertook competency assessments in new therapies, which re-enabled patients to care for themselves.

- Patients and their families were involved in discussions about their care and treatment. Ten patients told us that staff were very informative and were given full explanations of what to expect.
- One relative told us that there was 'good communication between the hospitals involved in the care and treatment' provided to their partner. They said they 'were fully informed in what was happening and involved in decision-making.' They said they experienced good care at this hospital. However, they said that generally communication between the hospital and their GP had been poor.
- We observed a patient discharge and saw that everything was explained clearly and advice given should the patient experience problems. Information of who to contact out of hours was also given.

Emotional support

- The 'Patient and Family Support Team' offered a compassionate and confidential service to assist patients prior to, during and after hospital visits. Practical and emotional support and advice was provided as well as support in areas including, post bereavement support, access to chaplaincy support and support for vulnerable patients during their time in the hospital.
- In theatres, we observed theatre staff welcomed patients into the anaesthetic room, put patients at ease and answered patient's questions.
- Staff showed a good awareness of patient's with complex needs and / or those patients with a learning disability. Staff told us during the patients initial pre-assessment staff determined what immediate support the patient required to aid them in their hospital admission and subsequent discharge.

Are surgery services responsive?

Good ●

We judged responsive as good as the service provided responsive services to the local population.

- The surgical service had good support internally and from other tertiary centres.
- Service planning and delivery considered the patients' needs, which meant changes to the service and how it was delivered benefited the patient.

Surgery

- The national referral to treatment data (RTT) target was 92%. The data provided by NHS England (February 2015 to January 2016) confirmed trust performance fell below both the England average and referral to treatment standard. The 18-week RTT times for elective cardiac surgery were an issue as demand outstripped supply. There were too many referrals and emergency patients' needs meant referred patients operations were delayed. The trust identified that the delivery of RTT 18-week waiting times was a key focus during 2015/2016. Additional funding ensured that performance improved significantly from June 2015 onwards with delivery of 18-week compliance each month, except for December 2015. The backlog of patients waiting over 18-weeks had significantly reduced and plans were in place for 2016/2017 to reduce the backlog further.
- The 'Home for Lunch' initiatives was implemented trust wide to improve the timeliness of in-patient discharge from hospital by ensuring everything was in place for a safe and timely return to their place of discharge by 12 mid-day. The discharge lounge opened in November 2015 and was used by patients who met its criteria.
- Support was in place for patients with learning disabilities or dementia type conditions and their families. The trust had identified a lead nurse for dementia who was also a 'Dementia friends champion.'
- Patients knew how to complain and we saw examples of lessons learned from complaints.

However we also found:

- Staff said that too many referrals and emergency patients' needs meant that referred patients operations were delayed. Delays in patient's transfers from the postoperative critical care unit to the wards occurred due to a lack of ward beds.

Service planning and delivery to meet the needs of local people

- Robert Owen House provides onsite relatives accommodation to support patient's families from outside of the area.
- People were involved in service planning through patient support groups. For example, at the aortic aneurysm support group discussions took place about potential service reconfiguration. The outcome resulted in the development of a pilot one-stop

multi-disciplinary (MDT) clinic, which all referrals go through. The aortic one stop clinic commenced in September 2015 for patients identified by consultants as suitable to attend.
- A one stop consultant led cardiac clinic was due to start in June 2016 to assist the backlog of cardiac cases.
- The 'Marfans' patient interest group was involved in planning one stop clinics out of region.
- The trust was in discussions with the community team so that patients care was monitored in the community through a telehealth system. The plan included the installation of a monitor on a ward, which was used to monitor up to 15 patients in their own home.
- An e-referral system was to be piloted from early May 2016. Three hospitals were involved in the pilot and were based in Liverpool, Wales and the Isle of Man. Consultants would access patient's referral information to ascertain how long their wait was and progress along the referral pathway.
- The trust identified that staff had reported on how the flow of delivering care had improved throughout the day following the introduction of open visiting hours. Patients were less disturbed by ward activity and better rested. Patient and family shadowing ensured patients were kept informed of their progress by observation and participation in bedside handovers and ward rounds.
- The trust was a member of the local 'Dementia Action Alliance' and was working with Liverpool Museum's 'House of Memories.'
- One visitor described hospital signage as 'appalling' as directions from the main entrance were not clear on how to get to Oak ward. In addition, there was no mention of Oak ward on the stair signage.

Access and flow

- Surgical admissions followed surgical pathways, which started at pre-admission clinics in the outpatients department following patient referral for treatment.
- Hospital episode statistic (HES) data identified the number of admissions to the service was 3,240 from September 2014 to August 2015. Of these 5% were day case admissions, 87% elective admissions and 8% emergency admissions.
- Admissions by speciality as identified by HES data (September 2014 – August 2015) were cardiac surgery (53%), thoracic surgery (42%), upper gastrointestinal surgery (3%) and other (1%).

Surgery

- The national referral to treatment data (RTT) target was 92%. The data provided by NHS England (February 2015 to January 2016) confirmed trust performance fell below both the England average and referral to treatment standard.
- The trust said delivery of RTT 18-week waiting times was a key focus during 2015/2016 following agreement with commissioners to recognise a significant increase in demand for services at the trust. Additional funding was agreed to deliver the RTT 18-week waiting times performance.
- The trust-identified performance had improved significantly from June 2015 onwards with delivery of 18-week compliance each month, except for December 2015. The 18-week backlog reached 199 patients waiting over 18-weeks for treatment at the end of December 2015 and exceeded the 92% target. This was primarily because of cancelled operations due to potential strike action in December and an increase in the proportion of urgent patients who took elective patient slots. The backlog of patients waiting over 18-weeks had significantly reduced and plans were in place for 2016/2017 to reduce the backlog further.
- The trust reviewed RTT performance at divisional performance meetings and a weekly report was produced for the executive team. Discussions at weekly scheduling meetings for cardiac and thoracic patients identified all planned cases for the following week. The weekly divisional performance meetings, included discussions on the top 10 late referrals. Late referrals were patients who breached their 18 week target either because they were referred from another trust or were an existing cardiology patient. A colour coded patient tracking list showed breached patients in red, patients breaching in the current month also in red, those breaching next month in amber, and then all other patients are shown as green as they had not yet breached. An action log produced following these meetings was emailed to all stakeholders.
- The RTT action plan, shared with the trust board and commissioners, identified actions to increase capacity to improve current RTT performance. These actions included additional operating sessions and recruitment of consultant staff. An advert for a second consultant was to be posted at the end of May 2016. In the interim, a locum doctor performed basic cardiac surgery and shadowed another surgeon. We were told additional weekend operation lists with voluntary staffing were in place and elective lists flexed to accommodate urgent referrals from other centres. Staff said currently, too many referrals and emergency patients' needs meant that referred patients operations were delayed. Senior staff said elective waiting times for cardiac surgery was an issue as demand outstripped supply as 115 patients were treated in another trust in 2015 and currently a backlog of 128 patients existed.
- Staff said waiting lists were managed through a hybrid referral system, which included individual and pooled referrals. The referrals were sent to the consultant and service manager who reviewed the referrals and identified patients with long waits or who were delayed so they were seen first.
- From the 1 April 2016, the surgeon of the day managed urgent referrals. This person reviewed patients, if the case was urgent and immediate, treatment required would treat the patient, and if the patients' needs were not urgent, they would be referred to their respective consultant.
- Arrangements were in place with the outpatients department to try to ensure that patients were seen in clinic before six weeks following referral.
- The 'Admissions and Discharges for Critical Care' (v1, issued 5 February 2014) policy provided staff with clear instruction on patient discharge processes from the postoperative critical care unit to ward areas following surgery.
- Staff said delays in patient's transfers from the postoperative critical care unit to the wards occurred due to a lack of ward beds. We asked how this had been managed and were told of discharge initiatives such as 'Home for Lunch', which was implemented to free up beds.
- 'Home for Lunch' main aim was to improve the timeliness of in-patient discharge from hospital by ensuring everything was in place for a safe and timely return to their place of discharge by 12 mid-day. The discharge lounge opened in November 2015 is managed by a dedicated discharge nurse who is supported by a healthcare assistant. Patients must meet selective criteria to use the discharge lounge. Staff told us that other patients were still discharged home from the wards.
- We asked patients and their relatives about discharge arrangements. One patient's partner stated that the discharge planning process had started for them at admission when they were asked initial questions about

what home support they had and who would be at home. Two other patients who were due to be discharged said a discharge-planning meeting was due to be arranged.

- Hospital episode statistics (HES) data (September 2014 to August 2015) confirmed the average length of stay for elective thoracic and upper gastrointestinal surgery was lower than the England average. Cardiac surgery patients had a higher length of stay of 4.4 days against the England average of 3.4 days.

- HES data (September 2014 to August 2015) confirmed the average length of stay for the top three specialities cardiac, thoracic and upper gastrointestinal surgery was higher than the England average for each speciality. The trust length of stay was between four to 10.5 days against an England average of three to eight days. The Trust had undertaken annual reviews for risk adjusted length of stay data to identify areas of focus for length of stay to be reported to the board. In 2015 / 2016, this exercise identified coronary artery bypass grafting (CABG) surgery and valve surgery after taking into account the expected risk of patients. These procedures were monitored throughout the year to the trust board. Thoracic surgery was identified as having a length of stay better than the expected average for the case-mix of patients.

- NHS England data identified the percentage of patients whose operation was cancelled and not treated within 28 days was consistently better than the England average from October 2013 to December 2015.

- NHS England data showed that cancelled operations increased as a percentage of elective admissions between October 2013 and December 2015. The trust figure was higher than the England average in all but one quarter from Q2 2014/15 to Q3 2015/16. The trust confirmed 157 operations were cancelled for non-clinical reasons during 2015 – 2016.

Meeting people's individual needs

- Single sex accommodation was provided in clinical areas, this provided assurance that people's dignity and privacy were maintained.

- Verbal and written language interpretation services were provided for people within the trust. Telephone interpretation services were provided were there was a need, for example, during consultations or appointments.

- Braille or large text documents were provided for visually impaired patients.

- Designated disabled spaces were provided around the hospital. There were some free disabled bays close to the main entrance. In the event that car parks for blue badge holders were full, drivers were advised to park in the main car park and use the courtesy bus service.

- Prior to admission patients with learning disabilities and their families could visit the hospital. During the visit, they could identify what they want their care to be like and any preferences to support their care. Patients were given a care passport to complete so that staff could learn about their individual needs prior to admission. 'I am going to go for it' DVDs developed by the 'British Heart Foundation' were offered to patients to take home. We were told that care partners also assisted and supported patients with learning disabilities.

- The lead nurse for dementia was a 'Dementia friends champion.' The trust said over 1500 people had attended the 'Dementia Friends' training over the last two years. In addition, over 30 staff attended a day's memory training. The lead nurse contacted the patient and family prior to admission and would if required visit the patient at home to assess capacity in their own environment. The lead nurse worked with the family to complete the 'This is me' tool so they could plan the care required.

Learning from complaints and concerns

- The head of nursing for surgery took overall responsibility for complaints and was supported by the patient and family support manager and team in this area.

- An easy-read leaflet available for patients was written in word and pictorial format. Additional information about the 'Independent Complaints Advocacy Service' (ICAS) was also identified.

- We asked four patients if they knew how to complain. They said they knew who to approach and felt confident in doing so. One patient said staff had showed them the complaints information. This patient said they knew how to complain or compliment the service and / or staff through an online facility. This patient had completed online feedback on the 26 April 2016 and received a response the same day.

- The inpatient surgical service received 13 written complaints from 1 February 2015 to 1 February 2016.

Surgery

Four of the complaints remained open. The complaint themes related to clinical care, staff communication, attitudes, and the discharge process. The clinical area, with most (x5) complaints, was Cedar ward.

- The trusts 'Making Experiences Count – NHS and Adult Social Care Complaints Process (v3.3)' included actions staff must take which were in line with the duty of candour (being open).
- Two staff we spoke with said they had received feedback following complaints. On Oak ward we saw that lessons learned from complaints were displayed for staff to see with action plans and progress made to date. On Elm ward since a complaint about noise levels at night was received, noise levels at nights had improved. Staff said that feedback about complaints was communicated through the safety huddle or email.

Are surgery services well-led?

Good 🟢

Overall, we rated the leadership of surgical services at Liverpool Heart and Chest Hospital Foundation Trust (LHCH) to be good.

- Formal cardiothoracic service strategies were being developed.
- Governance, risk and quality measurement processes were in place. Staff received updates through the governance, risk and quality frameworks. Risk registers were in place, which identified areas of risk across the service.
- The 'Speak out safely' campaign 'HALT' was implemented six-months ago to give staff the confidence to speak out.
- Trust information confirmed Cedar ward had the highest vacancy factor, levels of complaints and levels of sickness. However, to mitigate risk measures were put in place. These measures included monitoring measures, continuous nursing recruitment, the introduction of the safety huddle and introduction of new ways of working.
- Some staff we spoke with identified knowledge of the trust core values and what they involved.
- Clearly defined management and clinical leadership structures were in place.
- Individual management of the different areas within the surgical service were well led.

- Public and staff engagement processes captured feedback from both groups, which was generally positive.

However we also found:

- Some staff had a limited knowledge of the 'duty of candour.'

Vision and strategy for this service

- The surgical service had separate formalised strategies for cardiac services and thoracic services.
- The trust had undertaken a 'Strategic Options Appraisal' with KPMG to look at their long-term clinical strategy and response to the 'Healthy Liverpool Programme' proposed reconfiguration of hospital services across the city. As part of this option appraisal work focused on developing outline strategies at service line level. The cardiac and thoracic surgery work had been developed with wider stakeholder involvement to deliver a final strategy and delivery plan for each area. As part of the trusts draft 'Board Assurance Framework' these strategies are scheduled for completion by the end of quarter one of the new financial year.
- Staff identified involvement in the development of the trust values and vision. Both of the staff we spoke identified that the vision included being the best and the values included patient centred care and teamwork.

Governance, risk management and quality measurement

- A governance framework was in place. The governance committee meetings discussed aspects affecting the service, for example, serious incidents, complaints and incidents. Staff told us they attended the meetings where they had presented the clinical areas complaints and incidents and identified proposed actions. We were told these meetings were also attended by the head of nursing, medical director and clinical lead.
- We saw an example of where new guidelines were discussed at one surgical governance committee meeting. The meeting minutes (18 March 2016) identified that the 'National safety standard for invasive procedures' was work in progress. LocSSIPs (local safety standards for invasive procedures) would also be brought into the organisation.

Surgery

- Trust board involvement was evident in relation to risks such as serious incidents. This was demonstrated by the 'never event' discussions and updates at trust board on the 24 November 2015, 26 January 2016 and the 29 March 2016.
- Safety issues were highlighted to staff groups through the monthly team brief and newsletters from the chief executive officer.
- Trust information confirmed Cedar ward had the highest vacancy factor, levels of complaints and levels of sickness. However, to mitigate risk measures were put in place. These measures included monitoring measures, continuous nursing recruitment, the introduction of the safety huddle and introduction of new ways of working.
- Staff said the 'safety huddle' introduced six months previously was effective. Safety huddles took place at the start of each shift on the clinical areas. At 9.30am, a safety huddle led by the executive took place in the management offices attended by senior nurses and managers. Staff said that the direct communications with the executive team through this forum had broken down barriers and the executive were seen as 'friendly and approachable.'
- We saw evidence of safety huddle information documented from one clinical area for each shift change. Staff said information from the daily trust safety huddle was circulated to all clinical areas, which was useful, as you were made aware of issues in other areas.
- The 'Speak out safely' campaign 'HALT' was implemented six-months ago to give staff the confidence to speak out. We saw two examples of where staff had done this in relation to cannulation and consent issues on Holly ward.
- We saw risk registers in place at divisional and ward level.
- Theatre staff said the health and safety team completed a walkabout in theatres in April 2016 and improvements required were implemented. For example, label waste bags in the anaesthetic room.
- Performance dashboards were used to communicate performance for specific areas. Each clinical areas performance dashboard identified performance levels against named criteria. The trust performance dashboard was discussed by the executive team monthly. One area discussed was the 18-week referral to

treatment data. We saw from meeting minutes that the executive team received updates in RTT performance and progress and they agreed actions to improve future performance.

Leadership of service

- A leadership structure introduced on the 1 April 2015 comprised of a directorate triumvirate team, which comprised of a medical director, nursing director and clinical leads. Staff said that senior managers were supportive. Senior staff told us the surgical directorate triumvirate structure worked well within the service.
- The surgical nursing hierarchy included a head of nursing, matrons and ward managers who were supported by band six nursing staff. The unit manager reported to a matron, who reported to the head of nursing. Staff said they felt supported by the head of nursing who was described as 'approachable' and was a visible presence throughout the service.
- A new leadership course was opened to senior managers and clinical directors. Senior staff said that initially ad-hoc leadership training commenced in the summer of 2015. This training was now monthly.

Culture within the service

- Staff told us that staff at all levels were supportive, approachable and friendly.
- Four staff told us of a good team working culture where staff helped each other.
- Staff told us of difficulties experienced with a group of surgeons in theatres. However, senior management were proactive and had taken action against those staff involved.
- A recent review of theatres included listening events with staff from different disciplines by the interim theatre manager. It was confirmed a culture review was to be undertaken and this was underway. No actions were identified as data was being collated. However, we saw a theatre action plan had been developed.
- The theatres multi-disciplinary team attended human factors' training on the 15 January 2016. This was to explore the role played by human factors in patient safety incidents and to encourage learning.
- The trust identified that there had been formal training on 'duty of candour' which was covered in a training video, which could be accessed by staff. The trust-identified statistics, which identified the total number of staff who had watched the training video as

part of mandatory training figures. The head of patient safety confirmed that a 'duty of candour' policy was in place and recently a staff guide for 'duty of candour was launched and disseminated across the trust to staff groups. The trust identified that some staff had attended this training in January 2016. The trust target for 'duty of candour' training was 100%. Training statistics dated 31 March 2016 identified 62% of anaesthesia medical staff, 39% of surgery medical staff and 5% of nursing staff on Cedar ward had completed this training.

- We asked five staff about their understanding of the 'duty of candour' regulation. The 'duty of candour' is a regulatory duty that required providers of health and social care services to disclose details to patients (or other relevant persons) of 'notifiable safety incidents' as defined in the regulation. This included giving them details of the enquiries made, as well as offering an apology. When asked one staff member was not aware of this regulation, whilst four staff demonstrated some awareness of the duty of candour regulation and what it involved.

Public and staff engagement

- Staff feedback was collected trust wide through the 'Safety culture survey' (Autumn 2014) and 'Listening into Action' work over the last 12 months. This feedback resulted in an action plan.
- The NHS Staff Survey 2015 staff response rate was 4.2% against the national response rate of 4.1% for the key finding 'staff recommendation of the organisation as a place to work or receive treatment.' In addition, the '2015 National Staff Survey' completed by 59.3% of trust staff confirmed that staff engagement had improved.
- Staff said the executive team visited the wards monthly and described the executive team as approachable.
- Staff received bi-monthly newsletters to inform them of the latest news.
- Staff said they had received good support and regular communications from their line manager and that monthly team meetings took place.
- A 'Listening into Action' initiative was undertaken to support the discharge process so that patients were discharged home in time for lunch.
- The trust held at least four listening events per year close to where patients lived, for example, in Wales, the Isle of Man and locally. Listening events included a listening element where patients and their families were

encouraged to share their stories of care with the staff and discussions relating to service improvement and development. One example of patient's involvement was in relation to the Oak ward build. Patient and family engagement events were held in collaboration with the Kings Fund to determine what patients and families wanted the ward environment to be like. Mood boards were created and architects were invited in to be part of the patient discussions and listen to their needs. Plans were drawn up in accordance to national hospital safety requirements as well as patient and family preferences.

- The surgical governance committee minutes (18 March 2016) identified that the WHO checklist was taken to the quarterly patient & family experience meeting in February 2016.

Innovation, improvement and sustainability

- One staff member described their role as lead for surgery for patient shadowing. This process included shadowing on aspects of the patients pathway from which feedback was provided.
- On Elm ward, radios and earplugs were being purchased for patient's use, as two bays on the ward had no television or radio facilities.
- 'Back to the Future' is a multi-disciplinary team model of working for Elm ward at Liverpool Heart and Chest Hospital (LHCH) that places the patient at the centre of the decision making and builds a trans disciplinary working team (TDT). Pivotal to the delivery of this model of care were the concepts of person-centred coordinated care from the perspective of the individual and reablement using trans disciplinary working. A new role to be developed as part of the pilot is the 'Total Care Practitioner.' This non-registered member of the care team will play an essential role to support the patient to achieve their agreed goals through facilitation, reablement and delivery of delegated therapy and nursing interventions.
- A chest x-ray competency tool was developed for advanced practitioners and this had been shared both nationally and in Europe. The nurse led chest drain clinic was shortlisted by the Nursing Times Awards to enable patients to be discharged home with a chest drain connected to a flutter bag. An article was also published within the Nursing times. A standardised discharge letter was developed for district nurses with all relevant information. This enabled patients to be

Surgery

cared for at home without frequent trips to the hospital to aspirate fluid, therefore hopefully making the end of life more comfortable and dignified for patients and families.

Critical care

Safe	**Good**	🟢
Effective	**Good**	🟢
Caring	**Good**	🟢
Responsive	**Requires improvement**	🟠
Well-led	**Good**	🟢
Overall	**Good**	🟢

Information about the service

The Liverpool Heart and Chest Hospital is a specialist trust that provided services in cardiothoracic surgery, cardiology and respiratory medicine. The hospital provides services to 2.8 million people from the Isle of Man and North Wales as well as from the local area. The critical care service itself provides care and treatment to over 2000 patients per year.

The Surgical Intensive Care Unit (SICU) is divided into three main areas. There is an ITU area that has 11 beds and two separate POCCU areas with a total of 19 beds. All of these are equipped to provide treatment for patients who required level 3 care. There is also a 4 bedded HDU unit that is part of Cedar Ward and is located in a different part of the hospital. This area is used to treat patients requiring level 2 care and had undergone thoracic surgery.

During the inspection we spoke to a number of doctors and nurses of different specialities and grades, members of multi-disciplinary teams as well as patients and relatives. We reviewed a sample of patient records and observed patient care. We also reviewed information provided to us by the trust both before and after the inspection.

Summary of findings

We rated critical care services as being 'good' overall because;

- The unit was able to provide enough nursing staff to deliver safe care and treatment to patients.

- There was evidence that incidents were reviewed appropriately and learning was disseminated to staff so that improvements were made.

- There was a high level of compliance with mandatory training (87% overall) and education facilitators were available and provided regular training for staff.

- Staff responded and managed deteriorating patients appropriately and records and observations were updated regularly. There was an outreach team that followed up patients after being discharged.

- Care and treatment was delivered using up to date, evidence based practice. Patient outcomes and clinical effectiveness was regularly monitored and results were positive. Action plans had been developed to make improvements when needed.

- Staff had an understanding of safeguarding systems and there was a safeguarding lead and link nurses for the unit. We found that deprivation of liberty and mental capacity had been assessed in line with trust policy and legislation.

Critical care

- We saw examples of staff providing compassionate care to patients. Staff took time to discuss issues with relatives and involve them in decisions that were being made.

- The management team for critical care services had developed a strategy for improvement which included areas such as access and flow to and from the unit

- There was an open and positive culture within the unit. Leaders were visible and staff told us that they were supportive and approachable.

However,

- Approximately 35% of all discharges from the unit had been delayed by over 4 hours between April 2015 and May 2016. This was higher than similar units nationwide.

- The management team had struggled to manage mixed sex breaches in the POCCU areas of the unit in accordance with the Department of Health standard. This meant that patient's privacy and dignity were not always maintained. Mixed sex breaches were not recorded as clinical incidents as stated in the trust policy.

- We found that most of the risk assessments for the unit were last reviewed in 2011. However following our inspection the trust provided an up to date COSHH assessment /risk folder.

- We observed some occasions where staff did not wash their hands in between treating patients which mean that there was a risk of infection being transmitted between patients.

Are critical care services safe?

Good ●

We rated critical care services as 'good' for safe because:

- Incidents were reported using the trust incident reporting system. Staff gave us examples of incidents that were reported and told us that they received feedback as a result of the investigation. Learning was disseminated to staff through a number of different methods. There had not been any 'never events' and only one serious incident reported since January 2015.

- The environment was suitable to provide effective care and treatment and equipment was available and safe for use. Required checks were completed in most cases. This included regular checks of resuscitation and difficult airway trolleys.

- Patient records had been completed to a good standard using the electronic patient recording system. Medication charts were up to date and had been completed correctly.

- The unit had made improvements to the levels of nursing staffing. There had been a recent reduction in the use of agency staff due to incentives that had been implemented for bank staff and we found that on most occasions there were sufficient numbers of staff to ensure patient safety.

- Levels of mandatory training were high and were regularly monitored by the dedicated clinical education team.

However,

- Staff required prompting on three occasions to complete incident reports for things such as out of date drugs during the inspection.

- There was not always evidence to show that fridges storing medication were checked consistently.

- We saw examples of staff not washing their hands in between providing direct care to patients.

- There were currently a high number of nursing vacancies and the unit relied on bank and agency staff to fill shortfalls. However, these positions had been recruited to and staff were waiting for start dates.

- The level of out of hours anaesthetic registrar cover did not comply with the Intensive Care Society (ICS) guidelines.

Critical care

Incidents

- There was an up to date incident reporting policy that could be located on the intranet. Staff that we spoke to knew how to find this and were able to give us examples of the types of things that they reported. However, we had to prompt staff on three separate occasions to complete an incident report during the inspection to report things such as out of date drugs. This meant that in these cases there was limited assurance that lessons would be learnt and improvements made.
- The unit used a combination of an electronic and paper based system for reporting incidents. When staff completed a paper reporting form, a duplicate copy was left on the unit, reducing the risk that incident reports would be lost and therefore not investigated appropriately. The trust had plans to start using an electronic based system to provide a more consistent approach to incident reporting as well as providing a better system for analysing incidents.
- We reviewed all incidents that had been reported by the unit between January 2015 and January 2016. There had been 138 incidents recorded with the level of harm to the patient varying in severity between none to moderate. Types of incidents that had been reported included medicine errors, safeguarding and incidents of infections that had been acquired on the unit.
- Incident reports were sent to the risk management team but were mainly investigated by a member of staff from the unit. Staff told us that when they had reported an incident they had received feedback from the investigating person.
- Between January 2015 and December 2015 there had not been any 'never events' (never events are serious, wholly preventable incidents that should not occur if the available preventative measures had been implemented) and only one serious incident had been recorded. We found that this incident had been investigated appropriately and a root cause analysis (RCA) had been completed. An action plan had been implemented following this to prevent the incident happening again.
- We reviewed a number of other RCA's that had been completed, finding that the appropriate members of staff had completed them and that there were learning points and action plans for improvements to be made where needed.

- Incidents were disseminated to staff through safety huddle meetings and notice boards around the unit. There was also a quarterly newsletter that was published and contained information about lessons learned to improve standards of care.
- There had been two incidents where patients had sustained pressure ulcers. We were told that these incidents had been graded by the trust risk management team and had been managed in line with agreed policies.
- Morbidity and mortality was discussed in governance meetings and relevant cases had been reviewed with any areas for improvement identified.
- Staff had knowledge of the Duty of Candour and were able to tell us when it must be instigated. 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.

Safety thermometer

- Safety thermometer data was collated and analysed by the unit. The NHS safety thermometer is a national tool for measuring, monitoring and analysing avoidable harm to patients and harm free care. The data for this included patient falls, episodes of venous thromboembolism (blood clots), pressure ulcers and urinary catheter related infections. This was monitored on a monthly basis.
- Data received from the trust prior to inspection confirmed that there had been no occurrences of VTE between April 2015 and March 2016. Guidance from the National Institute for Clinical Excellence (NICE) states that all patients should have a VTE and a risk of bleeding assessment carried out within 24 hours of admission. This was the case in all of the records that we looked at.
- Between April 2015 and March 2016 there had been no falls reported by the unit and six unit acquired pressure ulcers, two of which had been grade 3 or above. The management team told us that these had been presented at the risk management meeting and they had been investigated appropriately by the management team. During the same period there had only been one report of a catheter related urinary tract infection.
- This information was displayed in the main corridor on a television screen for members of the public to see.

Critical care

Cleanliness, infection control and hygiene

- The trust had an infection control policy that was located on the intranet and had an infection control lead. The unit had a consultant intensivist and a link nurse who had the responsibility of improving procedures and processes when necessary.
- Staff had regard to the trust policy in that they followed 'bare below the elbow' techniques and wore appropriate personal protective equipment when required. However, we did see some instances of staff not washing their hands in between treating one patient and providing care to the next patient.
- The unit was visibly clean, as was the equipment. We checked a sample of mattresses of which the lining was intact and there was clean linen available for patients. There were housekeepers that worked seven days a week and there was an out of hours on call service. However, if a room or cubicle was contaminated then the normal process was to close the space and wait until the morning.
- Contaminated equipment such as ventilators where taken to another part of the hospital to be cleaned by the technicians when possible. When this could not be done, equipment was cleaned in the department.
- There was a laundry room available to wash equipment such as slide sheets. On occasions when they had been soiled, equipment was sent to the trust laundry to be cleaned thoroughly.
- There were seven doored cubicles with gowning areas and hand washing facilities located in the ITU area of the unit, any infectious patients who were in POCCU or HDU were moved to these cubicles which meant they were managed appropriately. Infections were screened in the pre-operative assessments.
- The management team had recognised the infection control risk of patients being transferred from another hospital so they ensured that on admission they were managed in a side room until they had been screened for infection.
- There were no positive pressure isolation rooms available in the unit (these were used for patients that were immuno-compromised and did not have a strong resistance to infections). We were told that any patients that required this were carefully managed in side rooms using reverse barrier nursing techniques (protective isolation) so that the risk of transmitting infections was minimised.

- There were policies and procedures for inserting arterial, central and picc lines. These procedures were done by either a doctor or an advanced nurse practitioner.
- Rates of unit acquired infections were similar to those reported by other trusts nationwide. Between April 2015 and March 2016 there had not been any instances of methicillin-resistant staphylococcus aureus (MRSA), one instance of methicillin-sensitive staphylococcus aureus (MSSA), two occurrences of colostrum difficile (CDIFF) and two occurrences of carbapenemase producing enterobacteriaceae (CPE). However, data that had been submitted to the Intensive Care National Research and Audit Centre (ICNARC) showed the number of unit acquired infections in the blood were slightly higher when compared to similar units.

Environment and equipment

- Critical care services were located in two areas. The intensive care unit (ITU) and the post-operative critical care units (POCCU 1 and 2) which were located next to theatres. The high dependency unit (HDU) was located on Cedar Ward in a different part of the hospital.
- All of the beds within the ITU and POCCU areas had equipment that was used to provide level 3 treatment to patients. The beds in POCCU were flexed to meet the needs of the patients ranging from level 2 to level 3 treatment. This was in accordance with the Intensive Care Society (ICS) guidelines.
- The ITU was an 11 bedded unit that was light and spacious. Both the POCCU areas were spacious but relied on artificial lighting. We found all of the areas to be tidy and uncluttered. The cubicles were spacious, allowing plenty of room for equipment and access for staff.
- Each patient cubicle had a daily checklist that was completed by a nurse on a daily basis. This included equipment and cleanliness checks. We reviewed a sample of these and found that they had been completed on a regular basis.
- There were a number of resuscitation and difficult airway trolleys around the unit. We saw these being used on a number of occasions and they were restocked by the support workers. We checked these and found that all equipment and drugs were present, in date and that they had been checked on a regular basis. There was also a chest opening trolley in the POCCU area

which contained equipment to re-open a patient's chest in an emergency situation. We also found that the equipment for this was present, in date and had been checked regularly.

- Disposable equipment was stored in an 'omnicell system'. This required staff to input a password to gain access and equipment that was removed was recorded on a database. A minimum stock level had been set for each item of disposable equipment ensuring that the correct items were always available.

- In the ITU, POCCU and HDU areas there were 'clean' clinical rooms that stored equipment and medication which we found to be clean and tidy. However, the hourly checklists that had to be completed by support workers for this area had not been done on a consistent basis. There were also 'dirty' sluice rooms which were also tidy and clinical waste was stored appropriately.

- The trust had an electronic biomedical engineering (EBME) department. They kept up to date records of when equipment had been last serviced. We checked a sample of equipment and found that there were appropriate and up to date portable appliance test (PAT) and service date stickers on most equipment. However, we did find that all of the pendants in the unit had service date stickers that expired in 2012. On checking with the EBME department we found that they had been serviced and we were told that the service dates would be updated.

- The EBME department had identified that the pendant hoses providing medical gasses were in excess of the manufacturer's life expectancy and that there was a risk of these perishing. This was on the risk register and quarterly medical engineering checks had been completed on these ensuring that they were safe. There was a plan in place to replace them in the next financial year.

- The unit had a programme in place for the routine replacement of capital equipment. The management team told us that there were no problems with funding when equipment needed to be replaced.

Medicines

- The trust had a policy for medicines management which was accessible on the intranet. This documented the procedure for stock replenishment, withdrawal, administration and disposal of medicines.

- There had been 23 medication errors reported between January 2015 and December 2015. These included both

documentation and administration errors. Medications administered were recorded on the electronic system. We checked a sample of electronic prescription charts and found that they had all been completed correctly.

- Medications were stored in locked cupboards in the clinical room. There were separate rooms for ITU and POCCU while HDU used the medication that was stored on Cedar ward. We found out of date medication (a topical drug) on POCCU1. We brought this to the attendtion of the co-ordinator and it was immediately removed. Controlled drugs (medicines that are required to be stored and recorded separately) were stored and recorded appropriately.

- Medicines requiring cool storage at temperatures below eight degrees centigrade were appropriately stored in fridges. Daily temperature check were within normal ranges and were mostly completed. However, there were 20 omissions on the daily checklist for the month of April 2016 which meant that there was no evidence of them being checked correctly on these dates.

- Each bed space had its own safe with a number combination lock so that a patient's own medication and those prescribed by the unit were kept safely. Medicines administration training was included in the induction programme for all staff to complete.

- The pharmacy team were available during normal working hours and out of hours there was an on call service for advice if needed. However, they were only available for three hours a day as they had responsibilities in other areas of the hospital. A pharmacist attended consultant led ward rounds once per week and there was a senior pharmacist who reviewed patients on a daily basis. There were two further general pharmacists who undertook medication reconciliation, stock management and were able to give general advice.

- There were two whole time equivalent (WTE) named pharmacists for critical care services. The Intensive Care Society (ICS) Guidelines state that there should be 0.1 whole time equivalent (WTE) pharmacist available for every level 3 bed and for two level 2 beds. On applying this ratio, the required standard was not being met as there was a shortfall of one WTE pharmacist to review patient's medication.

Records

- The service used a combination of electronic and paper patient records. These included risk assessments,

medication charts and medical notes. There were computers available at every bedside and staff were responsible for updating these on a daily basis. Paper charts were used to record physiological signs which included blood pressures and pulse rates.

- We reviewed a sample of patient records and found that they had all been completed appropriately and were easy to follow. This included risk assessment forms being completed, medical notes being up to date and medications being recorded accurately.

- When a patient was ready to be stepped down from critical care, a discharge form and a nursing handover was completed. The paper chart was transferred with the patient and the electronic system could be accessed by other staff within the hospital.

- The use of the electronic system had been identified on the risk register as it was not user friendly and could potentially lead to documentation errors. However, the management team had provided training in the use of the system to all staff members, reducing the risk of errors being made.

Safeguarding

- The trust had an up to date safeguarding policy on the intranet and staff knew how to access this.

- There was a safeguarding lead for the trust who was available during normal working hours and the unit had a consultant and nurse lead for safeguarding who were available to advice staff if needed. There were contact numbers available if there was a safeguarding concern out of hours.

- Staff were able to give us examples of what types of concerns were safeguarding issues and told us that if they had concerns then they escalated them to the team leader or the co-ordinator. This included things such as a deprivation of liberty being applied or if there were any concerns around mental capacity.

- There was a safeguarding section on the electronic patient record system. However, we found that there was no evidence of a visible warning on the main screen to indicate if there was an active safeguarding alert in place. Staff told us that they relied on any concerns being discussed in the safety huddle and as part of their individual handover.

- Adolescents were managed in the unit on occasions and there was a service level agreement in place with a local

paediatric hospital to determine where the best place of treatment was. Staff told us that if an adolescent was treated in the unit then an automatic referral was made to the safeguarding team.

- Safeguarding training was delivered as part of the mandatory training. This was delivered to level 2 for both adults and children. Compliance with part A (level 1) was 92%. However, part B (level 2) was only 64% which was below the trust target of 90%.

- Safeguarding level 2 training included modules for supporting patients who were living with either dementia or learning difficulties.

Mandatory training

- There unit employed three practice education facilitators who were critical care nurses by background.

- The education team were responsible for monitoring and delivering mandatory training. They had access to a spreadsheet that was shared with the trust learning and development team and highlighted if any training was out of date.

- The trust target for all statutory and mandatory training modules was 90%. The unit's overall compliance with statutory training was currently 87%. Statutory training included things such as fire awareness and information governance.

- 71% of staff were up to date with basic life support and 87% of staff were up to date with immediate life support. All band 7 co-ordinators and some band 6 team leaders had completed advanced life support training ensuring that there was always a trained member of nursing staff available. Out of the number of staff identified, 97% were up to date. This figure also included members of the outreach team.

- Records indicated that other areas of compliance with mandatory training were mixed. For example, 94% of staff had received training for mental capacity and deprivation of liberty. However, compliance with end of life training that developed skills such as advanced communication with patients and those close to them at the end of life was only 18% for registered nurses.

- The trust did not currently provide a cardiac advanced life support (CALS) course. This covered the roles that members of critical care nursing staff played if a patient had to have their chest reopened in an emergency situation. The management team told us that they had examined the benefits of introducing this but there were currently no plans to introduce it.

Critical care

Assessing and responding to patient risk

- Nursing and medical staff were trained in managing the deteriorating patient. A large paper chart was kept with the patient's physiological signs such as blood pressure and pulse rate and was used to identify if a patient had deteriorated over a period of time.
- We saw examples of a patient's condition deteriorating and nurses informing medical staff to review the patient in a timely manner. We also saw two patients requiring resuscitation and they were responded to immediately.
- The trust had a track and trigger system in place and there was an operating policy for this on the intranet. The system used the modified early warning score (MEWS) to identify a deteriorating patient. The MEWS score was calculated using a range of basic physiological signs such as blood pressure, pulse rate and respiration rate. If the MEWS exceeded 3 then a patient was referred to the outreach team to be reviewed.
- The critical care outreach team were available between 8am and 8pm seven days per week. The team consisted of 2.6 whole time equivalent (WTE) band 7 nurses who were from a critical care background and had undergone advanced training in patient examination and diagnostics. They had a clear role that was defined in their operating policy. This included responding to resuscitation calls throughout the hospital, following up patients that had received level 3 care and treatment, to assess deteriorating patients on the wards and provide intervention so that they did not need admission to critical care, to facilitate safe transfer to critical care if required and to provide education and teaching sessions to ward staff around identifying and managing the deteriorating patient. In addition, the team also met with patients and relatives who had been discharged and wanted to speak about their time in critical care.
- The outreach team audited their own performance on a monthly basis and also reviewed compliance rates with the track and trigger system. Between January 2015 and December 2015 there had been 3447 patient encounters and that during the same period, level 3 patients who had been discharged had been followed up on an average of 96% of occasions.

- Out of hours there was a hospital at night service. This consisted of resident surgical, anaesthetic and cardiology registrars who were available to review patients and respond to resuscitation calls. There was also 24 hour consultant cover if required.
- Staff told us that there were no delays in admitting a patient to critical care. However, the unit had not collected any data to corroborate this.

Nursing staffing

- The unit had a planned nurse staffing rota for each shift which had been calculated using a critical care nursing dependency tool developed by the Cheshire and Mersey Critical Care Network (CMCCN). This identified the registered nurse to patient ratio that was required to provide a safe level of care and treatment.
- Staffing levels were planned in a weekly meeting that involved the management teams from both critical care and theatres. This allowed the unit to calculate how many staff were required to safely manage patients.
- At the time of inspection, there were adequate numbers of suitably skilled and qualified nursing staff on duty to ensure patients received safe care and treatment. All level 3 (intensive care) patients were nursed 1:1 and all level 2 (high dependency) patients were nursed 1:2 in accordance with best practice guidance.
- We reviewed rotas over a 12 month period to the time of inspection and found that the planned number of staff had been acheived on most occasions. However, during this period, there had been 56 occasions when it was unclear if patients had been managed safely with the correct staff to patient ratio. This was because we did not see evidence of whether the shortfall had been filled by a member of supernumerary staff or how long the shortfall had lasted for. The management team told us that shortfalls occured mainly when the dependency of a patient had changed.
- The unit used bank and agency staff on a regular basis to meet the planned establishment. We found that there had been 14 occasions when the unit had used more than 20% of agency staff when filling an individual shift which did not meet the recommended intensive care society standard. However, we were provided with some assurance that the risk of using a high number of agency staff was being managed in that we saw evidence of agency staff having completed a full induction and had received training in the use of the electronic record system.

Critical care

- There was currently one whole time equivalent (WTE) band 7 vacancy, 25 WTE band 5 vacancies and three WTE band 2 support worker vacancies. However, the unit had received funding to add to their current establishment and all of these positions had been filled. However, staff were currently waiting for their start dates at the time of inspection.
- The unit ensured there were two supernumerary members of staff which met the Intensive Care Society standard. There were also two band 6 team leaders in the POCCU areas who were included in the numbers of staff providing direct patient care.
- The unit had one trained and one trainee advanced nurse practitioner who was available between 8am and 8pm seven days a week. They had additional skills, for example prescribing medication and inserting arterial, central and hemofiltration lines.
- There was a robust nursing handover system in place. A safety huddle was held twice a day and was led by the co-ordinator. We attended one of these and found that information was provided for staff such as incidents, concerns and training. There was a one to one nursing handover for every patient and staff had been trained in what information to cover when completing this. The band 7 co-ordinators also completed a handover sheet after the safety huddle.
- The unit had employed 10 WTE band 4 intensive care assistants (ICAs) to provide direct care to patients requiring level 2 treatment. Six weeks prior to the inspection they had been moved to other areas of the hospital where patients did not require the same level of support. During their time on the unit the ICAs were provided with a robust competency book ensuring that they provided a safe level of care. However, as they were not registered nurses they had to be supervised by a registered member of staff.
- Figures showed that there had been a reduction in the levels of sickness and absence over the past 12 months. This had been reduced from 10.9% in December 2014 to 5% in February 2016. However, this was still above the trust target of 3.8%.
- Staff turnover had remained the same over the past 12 months, ranging from 10% to 13.5%, which again was above the trust target of 9%.

Medical staffing

- There were eight consultant intensivists who were responsible for leading care and treatment. A further eight anaesthetic consultants worked in critical care on a rotational basis. However, they did not have specialist knowledge of intensive care and the management team told us that when working in critical care their responsibilities were for patients on POCCU only.
- During the daytime the ICS standard was met in that the staff to patient ratio did not exceed 1:15. Consultant intensivists were available to provide a daily review of patients in ITU and an additional anaesthetic consultant provided a daily review for patients in POCCU. Patients in HDU were reviewed separately by a surgical consultant.
- Consultants worked on a five day rota to provide continuity of care. Out of hours there was a consultant on call who had sole responsibility for critical care services and was available to attend the unit within 30 minutes if needed.
- Additionally, there was an anaesthetic and a surgical registrar who were resident 24 hours a day, seven days a week. However, out of hours cover fell short of the ICS standard in that the recommended staff to patient ratio of 1:8 was not met.
- Out of hours the anaesthetic registrar was also responsible for covering emergency primary coronary intervention (PCI) and provided airway management support for deteriorating patients and resuscitation calls throughout the hospital. However, we were provided with assurance that mitigated this risk in that the consultant on call attended to provide further support if the registrar was required to leave the unit. Aditionally, staff had not reported any incidents related to this and registrars told us that they felt they were able to provide a safe level of cover and that they were supported well by the consultants.
- The management team had recognised that the levels of anaesthetic registrar cover required improvement and plans had been discussed to increase the numbers. However, a business case for further medical recruitment had not yet been agreed.
- In addition, there were trainee doctors available during the day who were spending time in critical care as part of their rotation.
- There was a medical handover at the start of every shift and all patients were discussed. This was done as part of a ward round and we found this to be organised and effective.

Major incident awareness and training

Critical care

- The trust had a major incident policy that was up to date and available on the intranet. Staff knew how to access this if required. There was also an up to date preparedness and business continuity policy for the unit which covered actions to be taken in the event of an incident.
- As an example, staff told us about an incident when the generator had failed causing a loss of power and were able to describe how they had effectively managed this situation.

Are critical care services effective?

Good 🟢

We rated critical care services as 'good' for effective because:

- The unit used a combination of best practice and national guidance to deliver care and treatment to patients.
- Regular data contributions were made to the Intensive Care National Audit and Research Centre (ICNARC) and the Cheshire and Mersey Critical Care Network (CMCCN). This allowed the service provided to be compared against similar units both regionally and nationally.
- Results from audits that had been undertaken were mainly positive and action plans had been implemented to make improvements where required.
- The education team provided a high level of training and support to staff and team members were given the opportunity to develop their skills and knowledge. Staff were appraised on a yearly basis and were able to highlight areas in which they wanted to improve.
- There was a system in place to manage patients who required review for mental capacity and deprivation of liberty and staff that we spoke to had a good understanding of these.

However,

- Patients did not always have daily input from a number of services including speech and language therapy and microbiology.
- We found that the guidelines for the management of delirium were out of date and that there were no

guidelines for the administration of medication in palliative care cases. This meant that there was limited assurance that up to date evidence based practice was followed in these cases.

Evidence-based care and treatment

- The unit used a combination of best practice and national guidance to determine the care that they delivered. These included guidance from the National Institute for Health and Care Excellence (NICE) and the Intensive Care Society (ICS).
- A range of local policies and standard operating procedures were available on the intranet. We looked at a sample of these and found that all but one (management of delirium) had been updated appropriately. We also found that there was no evidence based guidance available for staff to follow when prescribing medication for palliative care patients.
- The unit made regular data contributions to the Intensive Care National Audit and Research Centre (ICNARC). This meant that the unit compared the care delivered and mortality outcomes with intensive care units nationally.
- The unit was also a member of the Cheshire and Mersey Critical Care Network (CMCCN) which provided an annual peer review which assessed a range of standards applicable to critical care. Records indicated that the last peer review had been for 2015/2016 and results showed that the unit was 90% compliant with the recommended service specifications. This was slightly better than other units within the network.
- The unit had completed a number of local audits in the last year that included ventilator care, pressure ulcer and central line care bundles. The results of these audits were mostly positive. However, records indicated that some results were mixed. These included risk assessments for skin care being completed (81%) and skin inspection (78%). Other areas of low compliance included prevention of acute kidney injury (65%) and appropriate documentation being completed for pressure ulcers (75%).
- Rehabilitation care plans were based on the Chelsea Physical Assessment Programme (CPAXX) which measures functional ability and was evidence based.

Critical care

- An audit had been undertaken against NICE Guideline CG83 (rehabilitation after critical illness) which showed that certain improvements needed to be made including having the correct staff to mobilise patients at the weekends to support their recovery.
- The management team had developed action plans for most areas that required improvement. However, this was not always consistent. Foe example, there was no plan to improve the availability of physiotherapy services.
- The unit had two audit clerks who were responsible for collecting and making continuous data contributions to both ICNARC and the CMCCN and had recently won an award for the standard of work that they had done.

Pain relief

- There was access to the pain management team for support and guidance through the week.
- We reviewed a sample of patient records and found that all patients in the unit had been assessed in regard to pain management. Staff used a pain scoring tool alongside observing for the signs and symptoms of pain.

Nutrition and hydration

- Guidelines were in place for ptients to be reviewed and for nutritional support to be implemented within 24 hours of admission. We reviewed a sample of patient records and found that this had been achieved in all cases.
- There was also fluid balance monitoring for patients which was used to assess hydration levels so that the optimal level of hydration was achieved. On reviewing patient records we found that this had been completed appropriately.
- Critical care services had one whole time equivalent (WTE) band 7 dietitian who was supported by a 0.6 WTE band 6 dietitian. The dietitians were not involved in daily ward rounds but did attend the weekly multidisciplinary team meeting. In the absence of a dietitan, there was a policy and procedure available that staff could follow when administering nutritional food and medicine.
- Audits were undertaken to ensure compliance with nutrition and hydration guidelines. Results from this showed that overall compliance was high. However, improvements needed to be made in the administration of motility agents (65%) when appropriate.

- We saw catering staff providing meals and there was a selection of food available for patients when appropriate.

Patient outcomes

- The most recent data that had been submitted and validated by ICNARC was for the period of April to June 2015.
- The ICNARC (2013) model mortality was 0.86 per 550 admissions for the period April to June 2015 meaning overall performance was similar to other services nationally.
- The mortality ratio for the same period using APACHE 2 (2013) model was 0.78 per 380 admissions. (APACHE stands for acute physiology and chronic health evaluation and is a severity score and mortality estimation tool developed in the United States of America).
- The unit's performance was similar to other trusts nationally for early (within 48 hours) and late (over 48 hours) readmission rates.
- The outreach team collected data on a regular basis which measured the effectiveness of the service that they provided. Between January and December 2015 the team saw 1191 patients. Out of these there was an improvement to the patient's condition on 1049 occasions and 740 patients' only required intervention on a single occasion. Following intervention, only 63 of these patients required admission to critical care services.

Competent staff

- The unit employed three whole time equivalent (WTE) practice education facilitators who were responsible for overseeing things such as mandatory training and clinical education.
- All staff from the unit were subject to an annual appraisal which gave them the opportunity to discuss strengths, weaknesses and individual performance. At the time of inspection 81% of nursing staff had completed this. Medical staff were appraised on an annual basis and in order for this to be signed off, compliance with mandatory training was required.
- The unit fell short of the Intensive Care Society (ICS) standard which requires 50% of nurses to have received training specific to critical care. Current compliance with this was only 40% and once the planned recruitment had been completed this would be reduced further to

Critical care

36.9%. The management team had recognised that this was a risk and had developed their own critical care nursing course that was accredited by a local University. This was being run on an annual basis and meant that it was easier and more cost effective to provide the training for a larger number of nurses.

- There was a robust induction process in place for new staff which included being assigned a mentor and a named educator. A critical care step one competency book was used during the induction period and included competencies such as anatomy and physiology, medicines administration, equipment and devices, end of life care, rehabilitation and mental capacity. All nurses received a minimum of an eight week protected supernumerary period. This meant that they were not included in the numbers looking after patients.

- Training sessions were facilitated on a regular basis and included topics such as hemofiltration, the management of delirium, manual handling and ECG recognition. The education team had recognised that due to the demand of the unit staff were not always able to attend these, so short training sessions were facilitated when possible for staff who were on duty.

- Staff had access to development within the unit. For example, the management team had created a team leader competency book which allowed nurses to be seconded into a team leader position. They were assigned a named mentor and were supported in completing their competencies and supervised while undertaking the role.

- Advanced Nurse practitioners received regular supervision by a consultant intensivist due to their range of extended skills.

- Medical staff received training on a regular basis and this was built in to their rota and working hours.

- There were two pharmacists available for the unit who both had the appropriate skills and knowledge to provide support for patients using critical care services.

Multidisciplinary working

- The management team from both critical care and theatres held a weekly planning meting to determine the number of staff required to safely care for patients.

- A ward round was led by a consultant intensivist twice daily, reviewing all patients. This also included the clinical registrars and junior doctors. However, it did not include other staff such as pharmacists and dietitians.

- We attended a multidisciplinary team meeting that involved the consultant intensivists, physiotherapists, pharmacists, speech and language therapists, advanced practitioners and dietitians. We found that this enabled all team members to have input into care and treatment that was being provided to patients.

- Physiotherapists worked closely with staff throughout the hospital. They were involved with pre-operation assessments, treating patients during their stay in critical care and providing further treatment once patients had been discharged from critical care to a ward.

- Critical care staff had a positive relationship with staff throughout the hospital and there was clear communication between teams when a patient was discharged. This was supported by a discharge policy which defined the role of staff in this process.

- The outreach team worked closely with nursing and medical staff throughout the hospital, identifying patients who required intervention or routine follow up following discharge from critical care.

Seven-day services

- There were two consultant intensivists available in the unit during the daytime seven days a week. Out of hours there was a consultant intensivist on call. They were supported by a team of an anaesthetic and a surgical registrar who were available 24 hours a day, seven days a week.

- Availability of allied health professionals was mixed. There were two teams of physiotherapists (respiratory and neurology) available to treat patients from Monday to Friday.

- Speech and language therapists were only available two days per week. The management team had identified this as a risk and plans were in place for an extra three days to be added. On days that they were not available a rehabilitation worksheet was left for either a nurse or a relative to complete with the patient. All patients required swallowing assessments to be completed on admission and to facilitate this extra training had been given to the lead physiotherapist and an advanced nurse practitioner.

Critical care

- Microbiology input was provided by a consultant microbiologist on site three days per week and was available to give telephone advice two days per week. Aditionally, the trust employed a pharmacist between Monday and Friday who specialised in microbiology and was contacted for advice if required.
- The hospital had a radiology department that was staffed during normal working hours and there was an on call service out of hours. Staff confirmed that there were no problems accessing these services when needed.
- There were two pharmacists available to review patients in the unit between Monday and Friday during the daytime and there was additional 24 hour support for advice if needed.

Access to information

- Staff were able to access the intranet which provided access to trust policies, procedures and guidelines.

- Patient records were mostly kept on an electronic system and there was a computer at every patient's bedside. This included risk assessment forms, medication charts, medical records and any input from physiotherapists. Electronic information could be accessed by staff throughout the hospital.
- Staff told us that they thought the electronic system was effective although it had taken them a while to get used to it. All staff had received a one day training course to familiarise themselves with the use of the system which reduced the potential for mistakes being made.
- When a patient was ready to be discharged from the unit there was a discharge sheet that was completed and a nursing handover took place to ensure that all information was transferred effectively.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- There were up to date policies for consent, best interest decisions, mental capacity and deprivation of liberty and were available on the intranet. Staff that we spoke to had an understanding of these and told us that any concerns were passed to the co-ordinator. Mental capacity and best interest decisions were also covered during induction to the unit and in mandatory training updates.

- There was a section on the electronic patient record system called 'ceilings of care' that was clearly visible to staff and was used if it had been decided that treatment was to be limited.
- Consultants were able to complete a deprivation of liberty assessment as were the advanced nurse practitioners. During the inspection we saw two examples of deprivation of liberty being applied. These had both been completed correctly in that an assessment had been carried out, a time period for review was in place, the local authority had been notified and it was dated and signed. DoLS are part of the mental Capacity Act 2005. They aim to make sure that people in hospital are looked after in a way that does not inappropriately restrict their freedom and are only done when it is in the best interest of the person and there is no other way to look after them. this includes people who may lack capacity.
- The unit used a confusement assessment method for intensive care units (CAMICU). This was used in association with the Ramsay score (RSS) which measured the agitation or sedation level of a patient. This had been completed in the patient records that we sampled.
- Sedation breaks were implemented were appropriate. A sedation break is where the patient's sedative infusion is stopped to allow them to wake and has been shown to reduce mortality and the risk of developing ventilator related complications. The sedative was then re-started if the patient became agitated, was in pain or showed signs of respiratory distress.
- Hand mitt restraints were used for agitated patients and there was an operating procedure that met national guidance for their use. These were designed to prevent patients from removing tubes and wires that were attached to them.

Are critical care services caring?

Good ●

We rated the service as being 'good' for caring because:

- There were examples of staff providing a high level of compassionate care. We received positive feedback from patients and relatives about the level of treatment

that had been provided during their time in the unit. Patients and relatives told us that the level of care received had been "100%" and that "the staff could not possibly do any more than what they have done for us".

- Staff recognised the need to support both patients and relatives in sometimes difficult circumstances and we saw evidence of this being actioned.
- There were appropriate chaplaincy and bereavement services that were available to support patients and relatives when required.

Compassionate care

- We saw examples of when conversations regarding a patient's care and treatment were managed in a compassionate way. On some occasions relatives were taken to private rooms where staff were able to have sensitive conversations with them.
- We observed unconscious patients being communicated with by both medical and nursing staff on a regular basis. We saw one example of a patient's position being moved and a member of staff explained what they were doing.
- On occasion patients became agitated and we saw staff managing them in a calm way so that the patient became more comfortable.
- Patients and relatives told us that the way in which they had been treated was excellent and that they would recommend the unit to friends and family if they needed specialist treatment. The friends and family test showed that 97% of patients and relatives recommended the service.
- We saw patient's dignity being maintained when care and treatment was being provided by curtains being drawn or doors being closed.

Understanding and involvement of patients and those close to them

- We reviewed a sample of patient records and found that care and treatment had been discussed with family members. During the inspection we also saw examples of relatives being involved in decision making processes. This was evident when ceilings of care or deprivation of liberty was being instigated.
- Patients and relatives that we spoke to told us that they had been involved in all aspects of the care that they had received.

- We observed that when a patient deteriorated staff communicated what had happened to the relatives in a way in which they understood the information that they were being given.
- The unit had introduced a relatives forum that gave patients and families the opportunity to feedback what was good about the service, if they had any concerns or if they thought something required improvement. We saw examples of when this had been taken into consideration and changes had been made as a result.

Emotional support

- Patients were allocated a named nurse and the unit provided continuity of care with the same members of staff when possible.
- We saw examples of staff taking the time to discuss issues with relatives and responding to them in a timely manner.
- There was an end of life link nurse in the unit who had undertaken advanced communication skills training. End of life care training was also delivered to all nursing and support staff so that they were better equipped in discussing issues with relatives when required. The end of life link nurse had the responsibility for providing advice for organ donation as the trust did not have an organ donation team.
- A chaplaincy and bereavement service provided support and information for families when required. Staff confirmed that chaplains were available to visit the unit when needed.

Are critical care services responsive?

Requires improvement ⬤

We rated critical care services as 'requires improvement' for responsive because:

- POCCU1 and POCCU2 consistently struggled to manage mixed sex breaches in accordance with guidance from the department of Health. The trust policy stated that patients required single sex accommodation once they were ready for discharge to a ward.

- There was a high proportion of patients that encountered delays in being discharged from the unit once they were ready. We were told that this was often as a result of capacity issues throughout the hospital.

Critical care

However,

- We found that the service had been developed to meet the needs of patients and relatives who used it.
- Services had been developed so that treatment such as hemofiltration was done within the unit. There was also an ongoing trial of an 'automated spinal drainage system' that was managed by a consultant intensivist and the clinical education team.
- A 'quick recovery' plan had been implemented so that patients spent less time in the unit and so that they made a quicker recovery. This had been nominated for an award and had been presented at a national conference.
- There was a low number of complaints and concerns, however the ones that had been received had been dealt with in a timely manner and learning from these had been disseminated to staff in the unit.

Service planning and delivery to meet the needs of local people

- The unit had struggled to meet the standard set by the Department of Health in managing mixed sex accommodation appropriately. This was a regular issue in the POCCU areas of the unit as all of the bays were open and meant that when patients had been stepped down to level 1 care and their discharge from the unit was delayed, their privacy and dignity could not always be maintained. Mixed sex breaches were recorded on a daily log that was kept by the co-ordinator. However, they were not being reported as clinical incidents as required by the trust policy for managing mixed sex breaches.
- A post-operative 'quick recovery' plan had been implemented to help patients spend less time in the unit. Data that had been collected measuring the effectiveness of this and results were positive. It showed that 68% of patients had been successful in 'quick recovery', 72% of patients had met the 6 hour extubation target and only one patient had to be readmitted following discharge.
- An automated spinal drainage system was currently being trialled (a spinal drainage system drains cerebrospinal fluid when required). We were told that it was common for human error to occur when this was done manually. The procedure had to be completed in

intervals and the automated system had been designed to make this process both safer and easier. The project was being run by a consultant intensivist and was managed by the practice education team.

- The critical care manager was involved in weekly planning meetings with the theatre team to determine the needs of the patients who were on the elective surgery list. This included providing treatments such as dialysis and hemofiltration when required.
- The ITU area of the unit had 11 doored cubicles for all patients requiring level 3 care. There were also a number of rooms with gowning areas which were used for patients with infections or those who had compromised immune systems and were at risk of developing infection.
- The unit had links with a local home ventilation unit. Home ventilation units are used for patients that require longer term care or have problems weaning (coping with the withdrawal of artificial ventilation).
- The waiting area for relatives to use had recently been modernised and there was an outdoor space that could also be used. These had been developed as a result of feedback from patients and relatives.

Meeting people's individual needs

- Staff were aware of the issues around sensory and sleep deprivation in the critical care environment and adjusted the lighting to simulate the difference between day and night time. This was more important in the POCCU areas as there was only artificial lighting available. Staff recognised that this could sometimes make patients agitated, especially when their sedation was being withdrawn. However, staff told us that patients were managed in ITU where there was much more natural light.
- The trust had a strategy for supporting patients who either lived with dementia or had learning difficulties. We were told that an assessment of a patient's individual need was often discussed as part of the pre-operative assessment so plans could be made prior to them being admitted to the unit. All documentation for this was kept on the electronic system which was accessed by staff when needed. There were flagging systems in place to identify any patients that required extra support.
- All patients who required care and treatment in the unit for over 72 hours were provided with a patient diary. Patient diaries had been developed to support patients

reflecting retrospectively on their period of being sedated during critical illness. Patient diaries are written for patients during ther time of sedation and ventilation. It is written by reltives, nurses and others. The patient can read their diary afterwards and is more able to understand what has happened.

- The trust did not have a formal critical care specific follow up clinic. However, the critical care outreach team provided this service for patients and relatives if they wanted to find out more information about their time in the unit. Patients were encouraged to bring their diaries that had been completed during their stay when attending this appointment.

- The unit had trialled a 'witnessed' resuscitation programme and were writing a report about this for publication. The purpose of this was to examine if it would be beneficial for relatives to be present while a patient was being resuscitated. As part of this, relatives had a choice whether to be present and those who chose to be present were supported by a member of staff who was not responsible for the care and treatment of the patient.

- The unit had both a consultant and a nurse lead who provided support with end of life care for patients. They had completed extra training to provide this service including advanced communication skills, palliative care modules and end of life symptom management. We saw an example of an individualised care plan that was designed to meet the needs of a patient who was on a palliative care pathway.

- The trust provided a chaplaincy and a bereavement service to support relatives and patients when required.Chaplains visited critical care to support patients and relatives when needed and there was a multi faith room avavailable for patients and relatives to use.

- Accommodation was provided for relatives to use when required. This was important as the unit treated patients from North Wales and the Isle of Man and relatives had to travel long distances to visit patients.

- There was a translation service available and an interpreter was able to attend the unit if needed. Advice leaflets in a range of different languages were available on request.

Access and flow

- The critical care service had three main areas, ITU, POCCU and HDU. POCCU was designed to be a short

stay recovery area following surgery. However, we were told that when ITU was at full capacity level 3 patients were cared for in POCCU. There was also a 4 bedded HDU area that provided level 2 care for patients who had undergone thoracic surgery.

- The unit had a high monthly bed occupancy rate. In the last financial year (between April 2015 and March 2016) there had been 2353 admissions to the unit. Between May and October 2015 bed occupancy varied from between 77% and 93%. During the same period approximately 35% of patients experienced a delayed discharge (over 4 hours from the decision to discharge being made) and 8% of patients had waited between 1 to 6 days to be discharged from the unit.

- The main reason for delayed discharges was bed capacity throughout the hospital. The critical care manager or matron attended daily bed management meetings to discuss patient flow. Recent strategies had been implemented to improve the time that a patient spent on the unit. The consultants had set up a 'quick recovery' so patients were ready for discharge in a more timely fashion. The management team were also involved in a wider plan to encourage use of the discharge lounge and the 'home by lunch' scheme that was being developed through the rest of the hospital which would free bed spaces so that patients could be discharged from the unit.

- Staff told us that if a patient deteriorated in the hospital and required treatment in the unit there were no problems in admitting them. However, during our inspection we found that this had not been officially recorded and monitored by the trust..

- Records indicated that planned surgery had been cancelled on 35 occasions between April 2015 and March 2016. A weekly planning meting was held to discuss how many elective operations had been planned so that this could be managed effectively.

- If the unit was at full capacity the medical team discussed which patients were appropriate for discharge in the event of an emergency admission. Records indicated that out of hours discharges (between 10pm and 7am) were well managed.

- We reviewed a sample of patient's records and found that on all occasions a full patient assessment had been completed by a consultant within 12 hours of admission. This was in line with the Intensive Care Society satndards.

Critical care

Learning from complaints and concerns

- The trust had a complaints and concerns policy that was found on the intranet. Staff that we spoke to knew how to locate this and had an understanding of it. Staff told us that any complaints and concerns were passed to the co-ordinator to deal with.
- During the period between April 2015 and January 2016 the critical care service had only received a small number of complaints with the majority involving POCCU and HDU.
- We saw that these complaints were dealt with in a timely manner and that some had been either upheld or partially upheld. This means that the unit had recognised that there were elements of the care and treatment provided that could have been better. Learning from complaints was disseminated to staff through safety huddles, notice boards and quarterly newsletters.
- There was information available to both patietns and their relatives in the department about how to make a formal complaint.

Are critical care services well-led?

Good 🟢

We rated critical services being well led as 'good' because:

- There was a clear trust wide vision and strategy that staff were able to identify with. The management team had identified key areas of improvement such as staffing problems and had put plans in place to make changes, some of which were evident during the inspection.
- There was an up to date risk register and this highlighted all risks that the department currently faced. There were a number of meetings at both unit and divisional level that provided forums to discuss key issues and there was evidence that information was disseminated to staff on a regular basis.
- We found there to be a clear leadership structure and staff knew what their roles and responsibilities were. Staff told us that leaders were both visible and approachable.
- The was an open, honest and positive culture within the unit and we saw positive examples of teamwork between staff.

- The management team had engaged with the patients and relatives who had used the service and had made some adjustments as a result of the feedback.

However,

- We found that none of the risk assessments had been updated since 2011. The management team told us that this was to be rectified immediately.
- The management team had struggled to identify ways in which to manage the regular occurance of mixed sex breaches.

Vision and strategy for this service

- The trust had a clear vision and strategy which was underpinned by five goals. These were to deliver services of the highest quality, to improve services by developing innovative models of care, to maintain financial viability, to be the best NHS employer by 2019 and to develop productive relationships with key stakeholders. Their mission statement was provide 'excellent, compassionate and safe care for every patient, every day'.
- The trust had a set of values which based on being patient and family centred, accountable, and striving for continuous improvement and teamwork (PACT).
- Critical care services had developed a strategy for improvement which included an initiative to open a further 3 beds within ITU and POCCU once enough staff had been recruited to provide safe care and treatment for patients using them. The management team had calculated a new establishment of nursing staff for the service in order to reduce the reliance on both bank and agency staff. Recent recruitment had been completed. However, many of these had not yet commenced their employment at the time of inspection.
- The clinical team had recognised the need to have a further tier of anaesthetic registrars so that compliance with Intensive Care Society (ICS) guidelines were met. There were current plans to recruit from abroad but this process had not yet started.
- The management team were committed to improving access and flow through the unit by working alongside staff throughout the hospital to reduce delayed discharges and encouraging better use of the discharge lounge and the 'home for lunch' initiative.

Governance, risk management and quality measurement

Critical care

- There was a risk register in place that highlighted key risks that the unit currently faced including things such as the high usage of agency staff and the risk of infection as a result of patients being transferred to the unit from other hospitals. The register was up to date and had been reviewed in risk management meetings. The risks that the management team identified reflected what was on the register.
- Most risks on the register were being managed effectively. However, the service continued to struggle managing mixed sex breaches once patients were ready for discharge. The management team told us that they predicted that this would improve along with access and flow, although there were no immediate plans to manage this risk.
- The unit had a risk assessment folder that held documents for things such as manual handling and the control of substances hazardous to health regulations (COSHH). We found all of these to be out of date and had last been reviewed in 2011. This meant that there was a possibility of staff not adhering to correct protocols and procedures. The management team told us that there had been an oversight and it had been the responsibility of a member of staff to update these. We were told that these risk assessments would be reviewed as a matter of urgency. Following the inspection, we were provided with a COSHH risk assessment which was due for review in August 2016.
- All policies and procedures could be found on the trust intranet and covered topics such as admission and discharge, mixed sex breaches and arterial lines. Staff knew how to access these and they had all been reviewed appropriately. However, we did find the policy for the management of delirium to be out of date.
- The unit held a number of daily meetings with staff from both inside and outside of the unit. There were two safety huddles per day, a daily bed management meeting and a ward to board meeting that the management team told us had been effective in that it gave them a forum to discuss any issues directly with members of the trust board.
- There were also a number of weekly and monthly meetings including weekly intensivist meetings and band 7 nurses meetings. Incidents and complaints were discussed and information from these was disseminated to staff through safety huddles, emails and quarterly newsletters.

- We found that staff had clearly defined roles and responsibilities. Staff that we spoke to knew what their role was within the team. There were a number of consultant intensivists who each had an area of interest including things such as the management of delirium. There were also a number of link nurses on the unit with responsibilities such as infection control and palliative care.
- The service monitored the effectiveness of care and treatment that had been provided. There was an audit lead for the unit who was responsible for co-ordinating the clinical audit timetable. We saw evidence of completed care bundle audits that included things such as skin care and nutrition. The results of some of these were displayed around the unit.
- An action plan had been developed to improve the service following the last Cheshire and Mersey Critical Care Network (CMCCN) peer review. Some of the actions from this had been completed such as the introduction of a second consultant intensivist at the weekend and a five day rota for speech and language therapists.

Leadership of the service

- The division of clinical services and the critical care unit had a clear leadership structure. There was a divisional nursing manager who had both a critical care and a clinical education background.
- There was a critical care manager who led the unit and was supported by a matron who had been recently appointed at the time of inspection. Both of these had a large amount of experience in critical care. There was a band 7 co-ordinator on every shift working alongside three band 6 team leaders, one of whom was supernumerary. They were responsible for managing the unit on a day to day basis.
- There was a divisional clinical lead and a lead consultant intensivist for critical care who were responsible for managing and developing all clinical aspects of the unit.
- The unit had three dedicated practice education facilitators who were responsible for providing continuous training for all nursing staff and ensuring that appraisals and mandatory training were completed.

Culture within the service

- There was a positive and open culture within the unit. Staff were keen to tell us about how much improvement

there had been in the last few years and how much they enjoyed working in the unit. This was reflected in the improving levels of sickness rates. Records indicated that sickness and absence had reduced from 10.6% in December 2014 to 5% in February 2016.

- We saw positive examples of teamwork during the inspection and that staff were willing to help each other when needed.
- Staff told us that they were encouraged to report incidents and that there was learning from incidents and complaints.
- Between January 2015 and December 2015 results from the friends and family test showed that 97.6% of staff that completed the survey would recommend the critical care unit as a place to work.

Public engagement

- The unit held a weekly relatives forum that gave members of the public an opportunity to discuss areas that they thought were good or required improvement. There were also feedback cards that patients and relatives could complete.
- A relative's forum log had been created so that any information received could be shared with both management and staff.
- The unit had responded to some of the suggestions that had been made. For example, the waiting area had been modernised and that they had provided an outside garden space for relatives to use.
- The friends and family test that was undertaken between January 2015 and December 2015 showed that 97% of patients and relatives would recommend services at the trust. The friends and family test was completed on a monthly basis.

Staff engagement

- The unit had recently recruited three support workers and we were told that current staff from the unit had

taken part in the interview process. The management team had recognised that the turnover rate for this group of staff so this had been as a positive step in retaining staff.

- The management team completed staff surveys but we were told that only 28% of staff had responded to the last one. Feedback included staff wanting to complete their critical care nursing course and this was reviewed as part of their appraisal.
- Staff were encouraged to complete the friends and family test and this was completed on a monthly basis.
- There had also been the introduction of a flip chart which allowed staff to raise issues anonymously. We were told that there had been a good level of participation since this had been introduced. Staff were encouraged to leave both positive and negative comments about the service that was being provided.

Innovation, improvement and sustainability

- A 'quick recovery' plan had been implemented in POCCU so that time spent in the unit was kept to a minimum. This met patient's needs and supported patient recovery. This had been nominated to the finalist category for the 'nursing times awards' and had been presented at the cardiothoracic surgeon's conference.
- The unit was currently trialling an automated spinal drainage system that was led by the education team and a consultant intensivist. A family witnessed resuscitation programme had also been trialled.
- The unit had developed their own Critical Care Nursing course that was facilitated by the education team and accredited by a local University. This had provided a cost effective solution for training a larger number of nursing staff in a critical care qualification.
- We were told by the management team that although finances had to be tightly managed, the executive team were supportive in funding improvements for the unit.

End of life care

Safe	**Good**	●
Effective	**Good**	●
Caring	**Outstanding**	☆
Responsive	**Good**	●
Well-led	**Good**	●
Overall	**Good**	●

Information about the service

The hospital is a specialist tertiary referral centre for management of cardiothoracic conditions. The trust served a population size of approximately of 2.8 million people across Merseyside, Cheshire, North Wales and the Isle of Man. It also receives referrals from outside these areas for highly specialised services. There were 220 beds at the hospital including 186 acute and general beds and 34 critical care beds and a total of 1,427.9 whole time equivalent members of staff.

The trust provided specialist palliative care services 9am to 5pm Monday to Fridays and at all other times support was provided by another nearby trust or a local hospice. Mortuary services and facilities were also provided by another trust based on the same site.

The specialist palliative care team supported people affected by life-ending or life-limiting conditions both in and out the hospital environment.

We visited Liverpool Heart and Chest hospital as part of our announced inspection on 26th to 29th April 2016. During this inspection we visited Oak ward, Birch ward, Cedar ward, The Cath lab, Maple unit intensive care unit, POCU, coronary care unit, the chapel, multi faith room, bereavement room and relatives accommodation.

We spoke with 44 members of staff including senior managers, the specialist palliative care team, doctors, nurses, allied health professionals, porters, discharge coordinators and the chaplain. We also spoke with 1 patient and 11 relatives.

Summary of findings

We rated end of life services as 'Good' with overall because:

- The specialist palliative care team [SPCT] were competent, knowledgeable and responded to patients and their loved ones needs. The team had completed mandatory training and had received annual appraisals. They knew how to report incidents and raise concerns although not all incidents relating to end of life that were reported across the wards were escalated to the team which meant they didn't have an overview of the service or improvements required.

- There was an end of life strategy in place that had been shared across services at the hospital however not all staff on the wards were aware of the vision for end of life services. There were processes in place to monitor quality of the service and complaints were responded to appropriately.

- Palliative and End of Life care was provided on all wards at Liverpool Heart and Chest hospital and all staff were caring and committed to meeting patients' needs. In the previous twelve months, 174 patients had died in the hospital. During this time there were 255 in patient referrals made to the specialist palliative care team although there were occasions were referrals to the team were late due to the sudden deterioration of patients.

End of life care

- Guidance and care plans had been put in place following the removal of the Liverpool Care Pathway nationally in 2013. Medicines relating to symptom and pain control for people at the end of their life were prescribed appropriately with guidelines available across the wards. The trust had identified that separate guidelines specifically for patients at the end of their life on the intensive care unit were required and at the time of inspection these were being devised.

- Appropriate equipment was adequately maintained and available to patients at the end of their life. Records we reviewed included care plans and flow sheets completed for end of life (EoL) patients reflected national guidance.

- DNA CPR and ceilings of care, which involved the cessation of all invasive treatments and non-essential medication, were clearly documented and visible for staff to see. Patients were included in decisions about their care and treatment and we saw evidence of discussion with patients where relevant and families regarding decisions made and reasons why.

- Staff had access to specialist advice and support 24 hours a day from specialist palliative careon-call team for end-of-life care however consultant cover was only provided one day a week or 0.2 whole time equivalent (WTE) which did not meet the national requirement medical cover as outlined by the Association for Palliative Medicine of Great Britain which states there should be a minimum of 1 WTE consultant per 250 beds. This trust had 220 beds which equates to 1 WTE consultant.

- The trust was not eligible to participate in the national care of the dying audit however they measured and benchmarked themselves against a similar trust nationally and identified actions to improve and sustain service delivery.

- End of life training was limited with low attendance from staff across the trust accessing it although this was currently being addressed to identify specific training needs for each area. In Staff had access to a large variety of information relating to end of life care on the intranet and in addition wards had resource files which all staff were aware of.

- The SPCT worked effectively within their team but also with as part of multi-disciplinary teams, to deliver effective and timely care to patients. There was a multidisciplinary approach from chaplaincy services, patient services, and the SPCT and ward staff in supporting both patients and their loved ones. All staff we spoke to felt it was an important part of their role to care for patients and families and we save evidence of staff going above and beyond to ensure patient's needs were met.

End of life care

Are end of life care services safe?

Good ●

We rated Safe as 'Good' because:

- Staff were familiar with the electronic system in place for reporting and investigating incidents. Learning from incidents was discussed at governance meetings and staff told us they were discussed at the operational group meetings.
- Mandatory training compliance for the specialist palliative team was excellent and staff were aware of how to safeguard people from abuse.
- The SPCT were knowledgeable about what was appropriate for patients and management of EoL medicines including anticipatory medication. Lockable syringe drivers were adequately maintained and available to staff all the time.
- Record keeping was good although it was not always completed in the relevant area in the electronic patient record for example care after death templates were not completed although the information was documented in the nursing records.
- We saw that when a patient had a Do Not Attempt Resuscitation (DNACPR) or ceilings of care, which involved the cessation of invasive treatments and non-essential medication in place this was easily identified on the electronic patient record for all staff to see. Patients were discussed at staff handovers to ensure all staff were fully aware of those who had a DNACPR in place or were palliative or at the end of their life.

However,

- The processes for escalating relevant incidents from the wards to the specialist palliative care team were not consistently effective which meant that the specialist palliative care team did not have oversight of all incidents specific to their service.
- There was no alert on the electronic patient record to inform staff that a patient was palliative or at the end of their life. Palliative and EoL patients admitted to hospital were identified as a risk as there was no alert on the system on admission which did not comply with national guidelines and this was on the risk register. Trust data showed they were in the process of

implementing the Electronic Palliative Care Coordinators System (EPACCS) to ensure information across primary and secondary care was consistent and shared.

Incidents

- There were no never events or serious incidents relating to end of life reported from April 2015 to April 2016.
- There was a policy and procedure in place for reporting incidents and incident training was included in the trust's induction program and mandatory training. Staff were aware of the process to report incidents or concerns via the electronic system however not all staff on the SPCT we spoke to could give examples of the types of things they would report. One member of staff gave us an example of learning from an incident which had recently been reported and told us lessons learned had been shared verbally with the rest of the team. We observed that incidents were listed on the EoL steering group meeting agenda however none were discussed at the minutes we viewed.
- The specialist palliative care nurse lead told us they were not assigned to review and action incidents reported and there was a reliance on ward managers to escalate incidents related to end of life service to the SPCT. This gave the potential that the service lead was not aware of all relevant incidents. We were told by the SPCT lead that plans were in place for a new system to be introduced which will be managed by the risk management team who will escalate end of life incidents directly to the SPCT.
- There was six incidents reported relating to EoL patients from April 2015 to March 2016; two of those were not directly related to EoL or palliative patient care with one requiring an investigation and review of processes. Trust data showed that all the incidents had been reviewed and none resulted in harm. We spoke directly with the SPCT lead regarding these incidents and it was clear that the SPCT lead was not aware of all of these incidents at the time of inspection.
- SPCT staff told us incidents were discussed at the end of life operations meeting and emailed to the SPCT and link nurses. Incidents were on the agenda of the minutes we reviewed.
- Incidents reported across the hospital and duty of candour was discussed along with lessons learned as part of the divisional governance committee meetings.

End of life care

- Staff we spoke to were aware of their responsibilities relating to Duty of Candour legislation and senior staff were able to give us examples of when this had been implemented. The trust had a duty of candour process in place to ensure that people had been appropriately informed of an incident and the actions that had been taken to prevent recurrence. 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.

Mandatory training

- Staff received mandatory and training on a rolling basis in areas such as infection control, manual handling and fire. The trust target was 95%.
- Data provided by the trust showed that the nurses, occupational therapist (OT) and multidisciplinary team coordinator were 100% compliant with their mandatory training at the time of inspection. No data was provided for the rest of the team including the palliative care associate specialist and the medical as they were working under a service level agreement.

Safeguarding

- There were trust wide safeguarding policies and procedures in place, which were accessible to staff via the trusts intranet site. Staff had support and guidance from the safeguarding team during the office hours and advice out of hours and at weekends was from the hospital on-call manager.
- Staff we spoke to were aware of the safeguarding team and how to access them if required.
- Safeguarding training for both adults and children level 1 and 2 was mandatory for clinical staff. Trust data showed that specialist palliative care nurses had completed all mandatory training as required.

Cleanliness, infection control and hygiene

- There were policies for the prevention and control of infection and hand hygiene which were accessible to staff on the trust intranet.
- During our inspection we observed staff following hand hygiene practice, presenting in clinical areas 'bare below the elbow' and using personal protective equipment [PPE] where appropriate.

Environment and equipment

- The trust had a medical equipment policy which was shared with staff as part of the risk management induction and mandatory training. Staff could also access the policy on the trust intranet.
- The hospital used T34 McKinley syringe drivers which were portable, battery operated devices used for delivering continuous subcutaneous infusions. All the pumps were in a lockable box which prevented accidental changes to rate of infusion and all wards had keys to open box. However it was noted on the EoL dashboard that in May 2015, 3 syringe drivers used were not in a locked box, it did not indicate the reason why this occurred.
- Syringe drivers were maintained and staff told us they were accessible at all times from the medical library and although it was unclear how many syringe drivers there were across the hospital, during our inspection 9 were available for immediate use.

Medicines

- There were protocols for anticipatory prescribing which provided guidance to staff in assessing and prescribing appropriate end of life medications to manage symptoms such as pain, nausea or anxiety. Staff we spoke to were aware of the protocols and during our inspection we saw these on the trust intranet and in the palliative care resource folders on the wards.
- At the trust there was a pharmacist who specialised in palliative care which staff could access for support and advice.
- We looked at eight electronic prescriptions for patients who had received palliative or end of life care and found that EoL regular and anticipatory medications including analgesia for pain and sedation for agitation were prescribed and administered when appropriate. All medications were reviewed with appropriate medications discontinued although we noted some cardiac drugs were continued.
- An audit performed by the trust of 27 electronic patient records from April 2015 to October 2015 showed that 96% of patients had medication continued and discontinued documented which was better compared to records reviewed in a similar service at another trust.
- Patients who were discharged to their preferred place were provided with at least 2 weeks of take home

medication, and where relevant a prescription sheet would also be sent with them with anticipatory medication prescribed so this could be administered by nursing staff in the community.

Records

- Patient's records were electronic and each member of staff had an individual sign in and password which automatically records input from the person accessing the records. We observed staff were familiar with the electronic patient record (EPR) system and where to find and record information including end of life.

- There were flow sheets and care plans specifically for patients at the end of their life, which reflected national guidance. We reviewed and saw completion of seven electronic patient care records which included assessment and documentation of skin, mouth and bowel care, general hygiene, nutrition, hydration, pain control and advance care planning.

- Not all the documentation regarding end of life was completed in the designated area on the EPR for example care after death flow sheets and end of life templates were not completed but information was recorded in other areas in the EPR including the nursing or consultants notes. An internal audit performed showed that 42 out of 114 records reviewed April 2015 to February 2016 had both doctors and nurses assessments for EoL completed. These results do not assure us that decisions made in advance were easily accessible to staff.

- In the patients records we saw that the specialist palliative care nurse had reviewed patients and recommended palliative care treatments including anticipatory medicine. There was also documentation regarding consultation with the medical teams caring for the patients in most records.

- Ceilings of care and DNA CPR were clearly documented and clearly visible in red on the EPR and staff told us this was highlighted during staff handover.

- Staff told us patients who were transferred from another hospital with a DNACPR in place would be reassessed by the medical team on admission. We were told for those patients transferring from the hospital would be provided with a purple unified DNA CPR form, this would also be shared with a relative and ambulance crews. Prior to transfer ambulance control would be notified if a patient had a DNACPR in place.

- Following the death of a patient, their records were reviewed by the resuscitation officer or a clinical information analysist to clarify if DNACPR or ceilings of care decision was recorded as per policy. The recent DNA CPR audit from October 1st 2015 to 31st March 2016 showed that all (total of 73) DNA CPR and ceilings of care were documented in the correct section so all staff were aware of the decision however of those, only 85% had all sections completed. This does not assure us that all staff had access to the level of treatment expected for every patient. The report states that in the majority of the records there was clear documentation that discussions had been held directly with the patient or family members in the continuing care sections on EPR in the majority of cases.

Assessing and responding to patient risk

- The SPCT monitored the trusts performance in line with established best practice for patients who required palliative or end of life care and action plans were implemented for areas identified for improvement.

- A modified early warning score system (MEWS) was used throughout the trust to alert staff if a patient's condition was deteriorating. This is a basic set of observations such as respiratory rate, temperature, blood pressure and pain score and is used to alert staff to any changes in a patient's condition. Early warning indicators were regularly checked and assessed. Nursing staff on the wards we visited were aware of what to do and the escalation process if a patient deteriorated. Ward staff had contact details for the specialist palliative care team and the out of hour's team. Staff told us the services responded promptly when needed.

- There was no flag on the EPR system to highlight and identify if a patient was palliative or was at the end of their life which meant that potentially the SPCT were not aware of all in patients who may require palliative or end of life care. Palliative and those patients at the end of their life on admission to hospital were identified as a risk as this did not comply with national EoL guidance. This was on the trust's risk register and trust data provided shows that the implementation of EPACCS was in progress. Staff told us they discussed patients with a palliative/end of life prognosis at handover. On a ward we visited it was apparent that all staff we spoke to were aware of a patient along with their loved ones who was at the end of their life.

End of life care

- In seven patients records we reviewed we noted that all the risk assessments were completed including venous thromboembolism (VTE), pressure ulcers, falls and nutrition.

Nursing staffing

- End of life care was the responsibility of all staff across the trust and was not restricted to the specialist palliative care team.
- The specialist palliative care team (SPCT) were led by 1 WTE clinical nurse specialist. There was an additional 1 WTE palliative care nurse specialist who had been in post for 5 months. Each provided cover when the other was not available for example on leave.
- There was at least one link nurse on each ward at the hospital. The link nurses attended the EoL operational meeting and disseminated information to colleagues either by email or verbally at team meetings following monthly meetings. Staff on the wards told us the link nurses would share information with them.

Medical staffing

- The palliative care consultant attended the hospital once a week to review patients in hospital and in the clinic in addition to attending the weekly multidisciplinary team meeting. They also provided a link between the trust and the local hospice where they worked for the rest of the week. The consultant told us they would regularly speak with SPCT and they were available to be contacted by the SPCT for advice if required on weekdays.
- There was medical cover provided at the hospital out of hours and weekends with consultant on call cover for advice 24 hours a day, seven days a week.

Major incident awareness and training

- The trust had a major incident policy in place and staff we spoke to knew how to access it.
- Staff were aware of what they would need to do in a major incident and knew how to find the trust policy and access key documents and guidance.
- We saw a plan to ensure there was sufficient cover to look after patients during the junior doctor's strike.
- All staff undertook emergency planning awareness training as part of their induction.

Are end of life care services effective?

Good ●

We rated end of life services 'Good' for effective because:

- Guidance, care plans and flow sheets had been put in place following the removal of the Liverpool Care Pathway[LCP],which supported the individual needs of patients and their families
- The SPCT were not eligible to participate in the National Care of the Dying audit as there were not enough deaths per year at the hospital. However the team still measured and benchmarked themselves against a similar specialist hospital and implemented action plans to improve service delivery and outcomes.
- The SPCT nurses were competent and knowledgeable and had post registration qualifications in areas relevant to end of life care. The team had received their appraisals and clinical supervision was due to recommence.
- The SPCT worked closely as a team but also with other professionals both in hospital and in the community to effectively manage and provide care for palliative patients and those at the end of their life.
- We saw evidence that the nutrition, hydration needs were being appropriately assessed and monitored and pain relief was managed effectively. DNACPR documentation was fully completed with clear explanation as to reason why it was in place along with discussions with patient or family.
- On the intensive care unit there were no guidelines regarding medication for those patients at the end of their life within the critical care setting although we were told these were being devised at the time of inspection.

However;

- The Specialist palliative care team was available Monday to Friday from 09:00am until 5:00pm with consultant cover one day a week (0.2 WTE). On call cover at weekends was provided by SPCT nurses from another trust and out of hours support was provided by a local hospice. The trust recognised the need to provide increased medical cover and this was on the EoL and divisional risk register however the proposed increase in consultant hours still did not meet the national requirement of consultant cover outlined by the

End of life care

Association for Palliative Medicine of Great Britain and Ireland and the National Council for Palliative Care guidance which states there should be a minimum of 1 WTE consultant per 250 beds. This trust had 220 beds which equates to 1 WTE consultant.

- EOL Training and syringe driver training was on the risk register as there were issues with delivering EoL training to staff across the wards due to the size of SPCT along with staff having time to attend training. In addition EOL training courses were limited with variable attendance. The SPCT lead told us they were looking at ways to improve training and access and training needs analysis were being completed by each ward to allow a focussed EoL training plan to be devised to meet the needs of the wards

Evidence-based care and treatment

- The specialist palliative care team worked in line with best practice and national guidelines such as National Institute for Health and Clinical Excellence (NICE) quality standard 13 relating to end of life care for adults. Clinical audits were being implemented including monitoring NICE compliance and other professional guidelines.
- There were assessment and care plans for patients at the end of their lives, along with EoL flow sheets for patients. This reflected national guidance including NICE NG31 Care of dying adults in last days of life and replaced the Liverpool Care Pathway after the 'more care less pathway' report was published in July 2013. In addition on the electronic patient record there was guidance regarding end of life medications which all staff across the general wards had access to.
- However it had been identified that specific guidelines regarding drugs and doses were required for those patients requiring end of life medication on the intensive care unit. At the time of inspection we were told that these were currently being devised by the ITU consultant in conjunction with the SPCT. The SPCT nurse lead told us there was currently no formal process and standardised management in place. This did not provide assurance that the trust as a whole was providing consistent management of medicine's for patients at the end of their lives.
- An audit was performed by the trust to ascertain if patients at the end of their lives and those close to them were cared for as recommended in the end of life audit-dying in hospital: national report for England 2016. As part of this audit, 27 records were reviewed of all

anticipated deaths from April to October 2015 and the report was in draft in April 2016. The results showed that overall percentages were higher in 4 of the 5 quality indicators against national data. The trust was lower than the national average in documented evidence that the patient was given an opportunity to have concerns listened to. The organisational indicators were met in 6 out of 8 (75%) as there was no EoL facilitator post and although medical staff had access to communication skills training this was not part of the formal in-house training.

- Records we reviewed confirmed that recommendations and an action plan were in place which included increasing the use of EoL documentation and communication skills for medical staff. These were ongoing at the time of inspection.

Pain relief

- We reviewed nine prescription records and saw evidence of pain relief being appropriately prescribed in eight of the nine records we looked at. We observed thorough documentation from the SPCT nurse regarding medication including pain relief for palliative patients.
- However in one record we reviewed of a patient on the intensive care unit we observed that when an unconscious patient was commenced on the EoL plan, analgesia was commenced but we saw no evidence in the patient records that the patient was either in pain or agitated. However we observed medication was titrated on one occasion when it was thought the patient was in pain.
- Results from a post bereavement survey from January 2015 to January 2016 showed that 83% of families felt their loved ones pain control in the last two days of their life was 'good' or 'excellent', with 11% stating 'fair'. However we noted that the response rate was 20% with 20 questionnaires' returned out of 104 sent out.

Nutrition and hydration

- Each identified end of life patient care record had hydration/nutritional guidance and assessment flow sheets for staff to complete. The guidance included promoting patient independence, choice, safety and monitoring fluids at least 12 hourly. We noted that the guidance advised medical staff to refer to the GMC guidance 'end of life care: clinically assisted nutrition and hydration recommendations.

End of life care

- We reviewed eight patient's individual care records and saw clear documentation that patient's nutrition and hydration needs had been evaluated and appropriate action taken. On one patient record it was not clear what had been discussed as it stated that hydration /nutrition was not directly discussed with the family and to continue with intravenous fluids. However when we spoke with the family concerned they felt that they had had enough information and felt that the team had been open and honest with them.

Patient outcomes

- From April 2015 to 31st March 2016 there were 174 deaths at the hospital with most deaths occurring on the intensive care unit. The trust did not participate in the National Care of the Dying audit as they did not meet the eligibility criteria. However the service carried out a shortened audit using the some of the national clinical key performance indicators (KPI) to benchmark practices and included a comparison of data results with a similar trust nationally.

- The results of the shortened audit showed that the trust were above the national average in 5 of the clinical key performance indicators (KPI's) and had similar practice with 3. There were 2 KPI's that were below the national average which were the assessment regarding the patient's need for Clinically Assisted (artificial) Hydration (CAH) and health professionals discussion with the patient regarding the recognition the patient is dying. It was noted this may be because many of the patients died within a relatively short time and therefore these conversations had not had time to take place. Following the audit an action plan was put in place with 5 actions. Each action had an assigned person who was responsible to the action and progress to date. The results and actions were discussed at the end of life steering group.

- The National Cancer Patient Experience Survey in 2013/ 14 showed that the trust's was in the top 20% of trusts for 13 of the 34 questions including 93% of people rated their care as excellent or very good. 79% definitely felt involved in their decisions about care and treatment. The trust was in the bottom 20% for two questions; 72% of patients were explained possible side effects in an understandable way and 77% of hospital staff gave information about support groups.

Competent staff

- Trust data showed that all the SPCT had received appraisals apart from one who had recently joined the trust and was therefore not due. The trust target was 85 %.

- Clinical supervision was currently being undertaken on a voluntary basis and staff told us they preferred to receive it as a team rather than individually, although this was available. The SPCT confirmed they had received monthly supervision until recently when the member of staff facilitating the clinical supervision had left the trust. The potential to increase stress within the team due to no clinical supervisor was on the risk register. Staff told us clinical supervision was to recommence the following week following the recruitment of a clinical supervisor.

- The specialist palliative care nurses on the team had gained post registration qualifications and had attended various study days in relation to palliative/ EoL care. We did not receive specific data for others members of the SPCT however they told us they had also completed training including advanced communication skills and spirituality. The SPCT nurses and OT were qualified to deliver communication training to other staff.

- Palliative and EoL care training was part of the trust preceptorship programme for staff and included rapid discharge, symptom control, care of the dying and communication skills. We observed an aide memoire reflecting the 5 principles of best practice in EoL care and prompt cards for staff with advice on for specific symptoms, rapid discharge and out of hours advice line, we were told the aide memoire was distributed to staff during end of life training.

- EoL training for existing general ward staff was limited however they could access the preceptorship programme or other training sessions and modules provided externally including spirituality training. Core communication training was available at the hospital and data showed that between 47 to 100% of band 1 to 4 staff had attended and between 6 and 56% of staff at band 5 and above had received intermediate core communication training with the exception of staff in the radiology and outpatients department. Records we reviewed confirmed that within these departments no staff had received training. Staff we spoke to who had attended the training said they had found the training useful and a recent staff pre and post training self-evaluation showed an overall increase in staff's knowledge, skills and confidence.

End of life care

- The trust worked in partnership with local universities and staff across the trust had the opportunity to complete modules which were focused in EoL care. Trust data showed that from January 2014 to January 2015 ten staff had completed either degree or master's level qualifications in EoL care. In addition critical care and high dependency staff had been supported through the BSC cardiothoracic programme which included EoL training and intermediate communication skills with 42 achieving step 1 and 23 members of staff achieving step 2.

- Trust data showed across medical wards between 75 and 100% of qualified staff had received syringe driver training apart from Birch ward which was 20%. On surgical wards there were between 17% and 67 % of qualified staff and 6 qualified staff on Mulberry ward who had received the training. Syringe drivers were not used in all areas including intensive care unit and theatres and therefore staff did not routinely receive this training. Data received from the trust prior to inspection, showed that 83% of the end of life link nurses had received training and all the coordinators had received training during the week of our inspection which meant there were trained staff available to support colleagues in the use of syringe drivers.

- Compliance with syringe driving training was highlighted as a risk on the EoL risk register and staff had access to training resources on the ward and on the trust intranet to help reduce the risk to patient safety. Syringe driver training was not mandatory however we were told that syringe drivers were used routinely for continuous subcutaneous medications for patients requiring non- palliative care on two of the wards and therefore there was always trained staff available to support staff if required. We noted one incident reported in relation to setting up a syringe driver in which staff on the ward required assistance from the SPCT nurse in setting up the syringe driver to correspond with inserted syringe to ensure correct dose administered.

- Poor uptake in training specific to EoL care remained on the risk register since September 2014. The SPCT lead also told us delivery of training was an issue as the SPCT was a small team who had additional roles and there was difficulty in staff being released to attend the sessions. We saw no evidence of a clear plan for the provision or delivery of EoL however at the time of inspection each ward was completing a training needs analysis to identify specific needs for each ward the service.

- We were told there were plans in place for ten core modules specifically for EoL training for staff to access via E-learning. At the time of inspection this was currently under review. The SPCT nurse lead told us they had provided opportunistic clinical support to staff on the wards when patients are reviewed however they did not record when and which staff this was given to. We were therefore not assured that effective end of life training was available and accessible for all staff across the trust.

- In 2014/2015 66% and 2015/2016 37% of F2 medical staff attended a two hour care of the dying training session. In January 2015 surgical junior doctors attended a 'management of the dying patient' however data regarding attendance figures had not been established and medical junior doctors were due to attend a palliative care session later on in the year.

Multidisciplinary working

- The specialist palliative care team were a multidisciplinary team which were led by the associate specialist in palliative medicine. The team consisted of two clinical specialist palliative care nurses one of whom had also recently been seconded as an EoL and bereavement lead nurse but still had clinical responsibilities, an occupational therapist and a coordinator who all had different managers within the trust. In addition there were two palliative medical social workers who were managed by social services which was on the risk register due to the possibility of this leading to poor integration and an ineffective service due to for example lack of knowledge around trust policies. It stated on the risk register that the divisional lead would review key performance areas and have an agreement regarding roles and responsibilities.

- The SPCT nurse lead told us the nurses met daily and would informally discuss patients so that each of them had knowledge and understanding of the patient and their condition. The SPCT nurses worked closely and met regularly with other specialist palliative care nurses from the local hospice and trust as they were seen as key in identifying appropriate patients for the team.

End of life care

- The SPCT nurse lead told us if staff on the wards has contacted the out of hours advice SPCT or local hospice then details regarding the query and advice given was faxed over to the SPCT also a clinician would ring to verbally handover.

- There were weekly multidisciplinary team meetings attended by the SPCT and the chaplain where new and complex patients both in and out of hospital were discussed and actions identified however in the minutes provided by the trust we could not see time any lines in place which made it difficult to track progress of the actions.

- SPCT multidisciplinary team (MDT) worked closely with other specialisms across the trust and jointly held weekly clinics with lung cancer services, oncology and surgery. This ensured all relevant professionals were available to patients who required review, support and symptom control. The consultant told us this multidisciplinary approach was effective and worked well but it also saved the patient having to attend different appointments.

- The SPCT told us they supported other health professionals in managing and supporting palliative patients and attended other external meetings which included the local hospice and lung service.

- The SPCT had established links with community palliative care services and the local hospice which ensured patients received consistent care when transferred across services. The specialist palliative care nurses attended a weekly locality meeting at the hospice and discussed complex cases. This meant the SPCT were working as part of a multi-disciplinary team designed to enable effective communication between services.

Seven-day services

- The palliative care consultant worked one day a week. Information received from the trust confirmed that there was no specialist medical cover at other times. The limited nature of specialist medical cover was on the end of life and divisional risk register. There was one associate specialist in palliative medicine who worked at the hospital one day a week (0.2 WTE). The consultant informed us that when they were absent for example on leave, there was no one to provide specialist cover. Mitigating actions on the risk register include increasing the hours to 0.4 WTE at the end of the year however this

would still fall below the recommended staffing levels outlined by the Association for Palliative Medicine of Great Britain and Ireland and the National Council for Palliative Care guidance which states there should be a minimum of 1 WTE consultant per 250 beds. This trust had 220 beds which equates to 1 WTE consultant.

- The specialist palliative care team were available 09:00 to 17:00 hrs on weekdays. At weekends and bank holidays palliative care nurses were available from another trust for advice or face to face review and out of hours the staff had access to an advice line at the local hospice.

- Chaplaincy services were available twenty four hours a day via an on call system and referrals could be made via the EPR or bleep system..

Access to information

- There was a wide range of information specific to palliative and end of life care on the intranet which staff could access. Ward staff we spoke to were aware of where this information was and how to access it, one member of staff told us they had raised potential improvements of the organisation of information and this was welcomed by the SPCT.

- All the wards we visited had an end of life resource folder which included information such as setting up a syringe, anticipatory prescribing and the 5 priorities of care. Four link nurses we spoke to told us they maintained and updated the resource files on their ward. All staff we spoke with were aware of the information in the file and where it was kept.

- Staff told us conversations were held with GP's for those patients who were palliative or at the end of their life and the completed advance supportive template would be faxed to the GP and any other health professional involved in their care . This template would then be uploaded onto the EPR.

- There was an electronic palliative care coordination system which was in the process of being implemented, to be used to share and enable effective communication amongst health and social care professionals across primary and secondary care. At the time of inspection this was not yet ready to be used.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- There was a depravation of liberty safeguards (DoLS) policy in place which provided guidance to staff about

End of life care

the Mental Capacity Act 2005, depravation of liberty safeguards. The policy included roles and responsibilities, consent, capacity, best interests and process of a DoLS application.

- Staff had access to mental capacity act and depravation of liberty training, with the expectation they would attend every 3 years .Trust data showed that the specialist palliative care nurses had attended both the mental capacity act and depravation of liberties training.

- We reviewed eight DNACPR forms which were located on the EPR. We found these were fully completed by appropriate clinicians however there was nowhere on the EPR which allowed the document to be countersigned. Information was clearly documented on all records as to why CPR was not in the patients best interests along with records confirming discussions with the patient, where appropriate and family. We also observed discussions with a patient regarding deactivation of the implantable cardioverter defibrillator.

- We also observed clear documentation regarding ceilings of care on the EPR which was visible and available to all staff.

- Following the death of a patient, their individual care records were reviewed to clarify if DNACPR or ceilings of care decision was recorded as per trust policy. The recent DNA CPR audit from October 1st 2015 to 31st March 2016 showed that all (total of 73) DNA CRPR and ceilings of care were documented in the correct section so all staff were aware of the decision. However of those, only 85% had all sections completed. The audit report states that in the majority of the records there was clear documentation that discussions had been held directly with the patient or family members in the continuing care sections on EPR in the majority of cases.

Are end of life care services caring?

Outstanding ☆

We rated caring as 'Outstanding' because

- Palliative and end of life care services was provided by dedicated, caring and compassionate staff across the hospital. We observed that care was planned and delivered in a way that took the wishes of people account.

- When a patient died, staff ensured relatives were given the time they needed on the wards before transferring their loved one. Staff would support and accompany any relative to the mortuary to view their loved one.

- It was clear that there was a strong culture of person centred care for patients and their families and staff strived to meet the needs of the patients and their loved ones. It was evident that staff went the extra mile to provide care for patients who were nearing the end of their life or who had died and their families whose loved one had died for example arranging a wedding on the ward.

- Relatives we spoke to told us they felt fully involved and updated with their loved ones care and were always treated with dignity and respect and they themselves felt cared for. Surveys sent to patients and relatives were predominantly positive about their care and treatment..

Compassionate care

- All staff at the hospital we spoke to at the hospital felt it was important to provide care and support to people at the end of their life and their loved ones and felt they had time to care for the patient and their family. Patients at the end of their life were nursed in side rooms to promote dignity and privacy for them and relatives. Staff told us they would do everything they could possibly do in supporting patients and loved ones and they were welcome to stay with their loved one as long as they wanted. We spoke to relatives who felt that staff were also caring for them and, the relatives we spoke with told us staff would take the time to check if they needed anything for example food, drinks or a blanket. The relatives felt staff were looking after them as well as their loved one.

- Patients and their loved ones were treated with compassion and empathy by all staff across the hospital. We observed ward staff speaking with relatives in a calm, friendly and respectful manner. Relatives told us staff would explain things in a language they understood and felt fully informed and included in decisions.

- Relatives told us they felt staff always treated their loved one with dignity and respect and would always talk to the patient in a caring and compassionate way. Comments that were added to a palliative patient's

End of life care

survey in 2015 included 'care was of the highest standard in every respect' and 'at a very stressful time we found all staff very kind and caring to both myself and my wife. Thank you to all'.

- Staff shared excellent examples of end of life compassionate care, which showed staff at the hospital going above and beyond their duty to meet the needs and wishes of both the patient and their loved ones. This included a funeral for a patient who had no next of kin, which was arranged and attended by staff; a wedding was arranged for a patient who was at the end of their life to enable the patient to marry their loved one on the ward. We were told of on example, where staff asked a patient who was dying whether there was anything she really wanted and she said she had never had her hair coloured or streaked. Staff arranged for a mobile hairdresser to attend the ward and dye her hair just how she wanted. She died five days later. The SPCT nurse lead purchased and sent sympathy cards with their contact details on offering ongoing support to all the recently bereaved families they were involved with.

- Intensive care staff told us if a patient was at the end of their life then non-essential lines would be removed and observations would be stopped. If the patient was on a ventilator then some observations would continue but the screen would be turned away from relatives and alarms turned off. Staff told us this was done to try and minimise the distressing impact the machines and alarms could have on relatives.

- Ward staff and porters told us that loved ones were given as much time as they needed with their loved one in the last days of their life but also following death. Ward staff and porters were very respectful of patient and family wishes and transferred the deceased patient to the mortuary when the family were ready even if this meant the porters had to wait or return later.

- Deceased patients were transferred by two porters from the hospital to the mortuary on site, which was operated and managed by another trust. Trust data shows that all porters had received training in safely transporting of the deceased patient to the mortuary and 84% of porters had received mortuary specific training. The porters we spoke to told us the training was provided every two years.

- A bereavement survey completed by 20 people whose loved ones had passed away at the hospital from January 2015 to January 2016 showed that they felt 80%

of nurses and 75% of doctors always treated their relative with dignity and respect, 15% felt that doctors and nurses did this most of the time and 5% of doctors showed dignity and respect some of the time.

Understanding and involvement of patients and those close to them

- We were told advance care plans (ACP) were predominantly completed by specialist nurses. Ward staff were aware of them but none had completed any. On the EPR staff can input whether the patient has an ACP, lasting power of attorney and who the patient has agreed information relating to their care can be discussed with. We observed in the care records evidence of ACP where it was appropriate.

- In 2015 a survey was completed by 14 palliative care patients who had accessed the SPCT either as in or outpatient. The results showed 86% of patients felt that the treatment plan was explained fully and14 % to some extent. 86% who reported they had concerns all felt they were listened to and fully addressed. In addition the majority (93%) felt involved in decisions and the remaining 7% felt they were somewhat involved.

- During our inspection we observed the SPCT OT sensitively discussing and involving the patient in discussing the patient's diagnosis, next stages of treatment and therapist intervention with them and respectfully acknowledged the patient's wishes to decline equipment.

- Relatives told us they had been involved in decisions about care and treatment and had been given information in a language they fully understood. In the patients records we reviewed we observed all patients relatives had been supported and kept informed of their loved ones condition.

- Staff on the cardiac catheter laboratory told us if a patient passed away it would be treated as a sudden unexpected deterioration and families would be offered the opportunity to be witness the resuscitation of their loved ones. Staff on the unit told us evidence suggested that whilst not everyone would want to be present it can be more distressing to be separated from their loved at this critical moment. Staff told us there were perceived advantages for families including they can be with and speak to the patient and see that everything was done

and it can also help them come to terms with the death. However staff acknowledged that this could also have a traumatic effect on the person and cultural, emotional and religious needs would be taken into account.

- On the cardiac catheter laboratory unit staff told us a room was always available for a deteriorating or deceased patient and their loved one to be together and a butterfly logo was placed on the door to promote dignity and privacy and notify staff that a deceased patient and family were in the room.

Emotional support

- There was quiet space on all the wards where sensitive conversations could take place and where patients and family could spend time together.
- All staff we spoke to told us families were given the opportunity to stay and were encouraged to be involved in aspects of care of their loved one if they wished.
- Patient services were notified following the death of a patient and would arrange all relevant documentation to be completed. The staff arranged with the family a convenient time to come in and met the relatives in the car park located in a private area and accompanied them to the bereavement room so they didn't have to walk around the hospital. Staff told us if a relative did not wish to return to the hospital because it was too upsetting or they lived too far they would travel and meet them at the local registrar office.
- Patient services staff would spend time with and support patients loved ones, for example by booking appointments at the local registrar office, or answer any questions relatives had. Staff told us that if they didn't know the answer to any of the questions they would email the relevant person. Staff were able to give us examples were this resulted in a meeting being arranged with a consultant and family.
- A pleasantly illustrated folder containing a 'thinking of you' card with a contact number for patient services, information about what to do following a death and the death certificate is given to the next of kin. Also the deceased patient's property was returned in a linen bag and jewellery was placed in a small purple organza pouch, which had personally been purchased by the SPCT nurse lead.
- The chaplaincy service had a volunteer service that sat with patients for short periods at a time during the last days and weeks of life if they had no loved one or the loved one was not able to stay at that time. We were

told this gave great comfort to relatives and loved ones. Staff on a ward also told us they had sat with a patient so they weren't on their own whilst their wife went and had some rest.

Are end of life care services responsive?

Good 🟢

We rated responsive 'Good' for responsive because:

- The specialist palliative care team saw 99% patients within 24 hours of referral. The team were visible and all staff we spoke with knew how to access them.
- There was no specific ward for palliative or end of life patients however where possible they were allocated in side rooms to promote privacy and dignity. Facilities were available at the hospital for families including for those who chose to stay.
- People were involved with and had a choice in their care; they could make decisions in their preferred place of death, resuscitation status and treatment options.
- There was a rapid discharge policy in place for patients wishing to go home in the last days or hours of their life and although this had not been required at the hospital in the last 12 months staff on the wards were aware of it.
- Patient's cultural and religious preferences were acknowledged and there was support available to patients, relatives and staff from the chaplaincy service.
- Complaints were discussed at governance meetings with trends and themes identified and lessons learned shared across the trust.

However

- The complaints were displayed on the EoL dashboard but this data also included complaints from other services that were shared with the SPCT team thus giving an inaccurate total.
- There was no designated bereavement team in place although this was under review at the time of inspection. The specialist palliative care nurses, chaplaincy team and patient services offered support and assisted families after the death of a loved one.

Service planning and delivery to meet the needs of local people

- Specialist palliative care staff had a good understanding of the needs of the local population. The staff worked as

End of life care

part of the wider trust team and engaged with local hospices, discharge coordinators, specialist nurses and other professionals so patients were referred promptly to provide support and advice as required.

- There were no designated palliative care beds at the hospital although staff told us they transferred those patients at the end of life to a side room. Most wards had fold up beds for relative's to use either in the day room or next to the patient and staff told us if the ward was quiet they would allow relatives to use a spare side room.
- All wards had a day room and staff told us this along with light refreshments would be made available for relatives. On Oak ward there was a family room with access to refreshments, microwave and the access to some games for children on the intranet.
- There was accommodation available to relatives on site which was run by a charity. There was a charge for the accommodation but staff told us this could be flexible if needed. The facilities included private bedrooms, family rooms, quiet room and laundry room. Relatives we spoke with said they valued these facilities and gained support from each other whilst staying there.
- There was a service level agreement with another hospital based on the same site for mortuary services. The mortuary was open for viewing 08:30 to 4:30 however an on call technician was available outside of these hours, for both viewings and emergency release of the deceased patient.
- The specialist palliative care lead nurse was also the bereavement lead however there was no bereavement team in place at the time of inspection. We were told a service level agreement with bereavement services at another trust was under review at the time of inspection to provide one session a week.
- There was a recently refurbished bereavement room which was comfortable and homely for relatives and loved ones to go and meet with staff and collect their loved ones belongings and documentation. The room was shared with another trust but staff told us they never had a problem accessing it.
- The trust were aware of the potential translation needs of the local population and had access to interpreters for patients whose first language was not English. Staff were aware of how to access these services if required. Records we reviewed confirmed that from January 2015 to January 2016 there were 130 referrals to the translation service across the trust.

Meeting people's individual needs

- Staff we spoke to had a good knowledge and understanding of advance care plans however they told us advance care plans were completed by the specialist nurses who knew the patients.
- We observed patient's cultural and religious preferences and specific needs documented in the electronic patient record and staff told us these were shared at handover. Staff took the wishes and needs into account when caring for the patient. Staff had access to a guide which was clear on caring for patients with different faiths before and after death however there was no guidance in caring for a dying patient who was a Christian.
- The chaplaincy team offered spiritual support both before and after death including last rites and blessings to patients of all or no faiths although patients were encouraged to use their own spiritual leads if possible. Staff also liaised with their colleagues at local parishes for families who required extra support .There was a multi faith room which had literature and prayer mats were available and a chapel which held services throughout the week for different religions including Church of England, Roman Catholic, Free Church and Methodist. All staff were aware of how to access the chaplaincy service if required.
- Specialist nurses were available at the hospital and provided support and advice to staff to assist in meeting individual needs for patients who were living with dementia or a learning disability.
- Patients and families had access to leaflets including mouth care, coping with dying and bereavement and included the contact number of patient services. A satisfaction survey completed by fourteen palliative patients from January to December 2015 showed that 86% of patients had been offered written information, with 7% not remembering and the other 7% stating they hadn't. However all patients felt they had received the right amount of verbal or written information.
- The OT would sit with palliative care consultant when reviewing patients in clinic to identify and discuss any identified needs relating to the activities of daily living.
- The service lead told us always contacted palliative patients and relatives known to them by phone

following discharge from hospital to ensure they were ok. The service lead also told us they would assist patients in any way they could and has arranged for patients to be reviewed by the SPCT in clinic.

- Trust data on the EoL dashboard showed that from April 2015 to March 2016 between 75 and 100% of patients were discharged to their preferred place of death with a total of eight months achieving 100%. The service lead told us this data did not capture what happened following discharge therefore not confirming whether the patient was able to stay and therefore pass away at this preferred place.
- We reviewed the records of a palliative patient who wanted to go home quickly but did not meet the 24 hour rapid discharge criteria and it was evident regular discussions had taken place both with the patient and family. Documentation and assessments including continuing health care assessment, summary of anticipated needs were completed thoroughly and faxed to the relevant teams.
- Equipment was in place, including pressure relieving equipment and anticipatory medication was provided and prescribed on discharge for nursing staff to administer at the patients home. The patient was discharged to their preferred place within 2 days of the decision to discharge.

Access and flow

- The SPCT reviewed patients who were in hospital but also ran a weekly outpatient clinic. Patients and their families were supported from pre diagnosis into bereavement if they lived within the Liverpool locality. The palliative OT and medical social workers saw patients both in hospital and in the community setting and were designated 'key workers' which provided patients with continuity of care and reassurance for the patient.
- Referrals to the SPCT were made by ward staff using the trusts IT system or telephone. There were occasions where referrals to the team were unavoidably late due the sudden unexpected deterioration of some patients. Between April 2015 and March 2016 there were 255 in patient referrals the specialist palliative care team, 253 of these patients were seen within 24 hours of referral. Ward staff told us the SPC team responded promptly to referrals and we observed this in patient's records.
- Out of hours staff had access to the local hospice advice line, data provided by the trust showed that from April

2015 to March 2016 there had been ten calls for advice which included symptom control, general support and syringe driver advice. On the annual report dated March 2016 it states there were four call however it was noted on both the annual report and the quality committee paper the number of calls may not be accurate as staff had noted in the EPR they have contacted the advice line but the local hospice had not recorded this. There were no contacts for the same period with the SPCT from another trust who provided cover during the day at weekends and bank holidays.

- The SPCT nurses also supported local patients who were at home and were available over the phone for any support or advice and if there were any concerns they would arrange for a review with their GP or at the weekly palliative care clinic at the hospital.
- There was a rapid discharge policy for terminal patients requiring discharge to their preferred place to be cared for in their last days of their life within 24 hours. The policy included a check list for staff to complete. Data provided by trust showed there was an agreement with the local ambulance service that patients would be prioritised and transport provided within 1-2 hours. The trust told us they have arranged for a private ambulance in the past to transfer a patient who lived outside the area to their preferred place. Since April 2015 no patients were discharged via this pathway.
- The hospital had a discharge team and oxygen team who worked together with the SPCT to coordinate and expedite patients discharge to their preferred place.
- Ward staff would notify patient services following the death of a patient. To assist in the process of completing documentation including the death certificate, post mortem or cremation papers, staff from patient services told us they would review the patient's records to identify which Dr was required to complete the documentation.
- We saw one reported incident where there was a delay in completion of the bereavement paperwork due to the doctor being off duty and the family had to wait. This was rectified by another doctor completing the paperwork however it did not state when this was done or how long the family waited. Recommendations included reminding the doctor to use out of office when away.

Learning from complaints and concerns

End of life care

- The trust's complaints process was part of mandatory training and staff we spoke to were aware of the complaints process. We noted that leaflets explaining how to complain were available throughout the hospital, for patients and relatives.
- Complaints received by the trust were recorded electronically on the trust-wide system. The patient and family support manager supported the divisional lead in investigating complaints and creating a response in agreement with all those involved.
- The EoL dashboard states there were twelve complaints however we were told there were only two complaints made directly to the EoL time. Trust data provided stated that the other ten complaints were not directly related to EoL but were on the EoL dashboard as the team worked closely with the patient and family support manager who shared complaints from families of patients who have passed away. The EoL dashboard is accessible to all staff and this information is not reflected in the data recorded.
- Between January 2015 and February 2016 there were two complaints made to the EoL team regarding clinical care. Each complaint had been acknowledged on the same day of receipt and were responded to within timelines agreed with the complainant. The complaints were investigated and no action plans or lessons learned identified. At the time of inspection one of the complaints remained ongoing
- Complaints were discussed by the mortality review group and governance meetings and lessons learned and action plans formulated. Staff told us complaints and lessons learned were shared at the team meeting. The service lead told us they struggled to attend these meetings as they were at a similar time of the MDT meeting. We were told a nurse specialist attended and fed back verbally or by email.
- New and ongoing complaints were discussed at the EoL steering group with trends and themes identified. We observed this is in one of the two sets of minutes received from the trust.

Are end of life care services well-led?

Good 🟢

We rated End of Life services 'Good' because:

- End of life services were well led by the specialist palliative care lead nurse with evidence of effective communication and leadership within the team.
- There was an end of life strategy in place which was in line with the National Leadership Alliance Recommendations and was available to all staff on the trust intranet.
- The visibility of senior management was good and there was a clear governance structure in medical services which oversaw the end of life service.
- Staff worked well together, felt supported, valued and able to speak up if they had concerns. All staff were committed to delivering good, compassionate care and were motivated to work at the hospital.

However,

- Not all staff across the hospital were aware of the EOL strategy.
- End of life services captured views of people who used the services along with staff who delivered care however in response we saw no evidence of recommendations or action plans.
- A risk register had recently been devised with actions identified however not all risks had a review date.

Vision and strategy for this service.

- End of life services had a strategy which reflected the National Leadership Alliance Recommendations and was reviewed by the EoL Steering Group. End of life is everyone's responsibility' was one of the main principles in the EoL strategy and all staffs views reflected this.
- The strategy had been recirculated in the last year to raise awareness to staff across the hospital in addition the strategy was available on the intranet. The EoL team and link nurses were aware of the plans for the EoL service however most of the staff we spoke with on the wards were unable to tell us about the EoL strategy.

Governance, risk management and quality measurement

- Recently a risk register had been devised for end of life services to highlight risks including medical cover, training, management of the palliative medical social work team and clinical supervision. At the time of inspection there were 7 risks on the risk register with each having a description of the risk, a risk score, current and additional mitigation action, a named person responsible for dealing with the risk and the date

End of life care

it was last reviewed. However there was no date to when the risk was going to be reviewed which meant we were not assured that risks were being managed in in timely way.

- Risks corresponded with the issues the SPC team lead highlighted to us and their action plan for addressing those risks. The risk register was managed by the service lead and is overseen by the divisional manager. The team leader told us they had been supported by the risk managers.

- Senior managers knew there was a risk register and the SPCT were able to tell us what the key risks were for example medical cover and EoL training.

- There was clear governing reporting structure within medical services which oversaw EoL services. Clinical Governance meeting were held monthly and well attended. During each meeting, there was a review of clinical incidents, complaints, risk register and EoL services. Actions and those responsible were identified however there was no date the action was to be completed which made it difficult to track progress.

- There was a monthly end of life and bereavement operational group which was chaired by the service lead and attendees included link nurses, specialist nurses, pharmacist, senior managers and medical staff. There was discussion around training, incidents and risk assessments with actions identified along

- The EoL steering group met monthly however it was noted in the EoL annual report that medical support was poor and attendance variable. The minutes we reviewed included discussion around EoL strategy, patient experience and education and had actions documented for specific individuals to address.

- Morbidity and mortality meetings were held monthly and reviewed all deaths across the hospital. Minutes from the meeting included an action log and learning and it was apparent that some were discussed at the clinical governance meeting. However it was not always clear who was responsible or expected date of action to be complete. The SPCT nurses shared an example of lessons learned following a review of a patient at the meeting.

Leadership of service

- The end of life care service was under the executive leadership of the Director of Nursing and Quality and there was also a non-executive lead who was member of the EoL and Bereavement Operational Group. Staff reported the executive team were accessible.

- The specialist palliative care team lead had recently been seconded as the end of life and bereavement nurse lead; this was in addition to their clinical responsibilities. Despite this they demonstrated effective leadership and understood the challenges in providing good quality palliative and end of life care across the trust.

- The SPCT felt valued and respected and felt there was no hierarchy within the team and the staff spoke highly of the specialist palliative care team lead and told us they received good support. It was evident they worked well together and they were proud and felt that they made a difference to people's lives.

- The SPCT focussed on cultural change and clinical engagement with their fellow colleague's and presented at audit meetings to raise awareness of their service. Staff throughout the trust said that the palliative care team were accessible, visible and approachable with many ward staff we spoke to knew the nurses by their first name.

Culture within the service

- Staff we spoke to across the trust were passionate and motivated in providing high quality care and support to their patients. They were positive and felt fully supported by the end of life care team.

- The SPCT felt valued and respected and were comfortable in raising any issues as they felt their opinion was respected.

- The latest NHS staff survey results for 2015 results showed that a score of 4.2 of staff would recommend the hospital as a place to work or be treated, this was better than the national score of 4.1 and the score for staff feeling motivated at work was the same as the national average of 4.0.

Public engagement

- Patient and family surveys were sent out to collate information about end of life services. It was noted that the response rate was poor and 'tell us' card was developed to give relatives an opportunity to give feedback however at the time of the report survey none had been completed.

End of life care

- There was a monthly public and staff newsletter available on the intranet which updated on developments and general information about the hospital.
- The public had online access to the agenda and minutes from the trust board meetings which may help people to understand about the hospital's performance.

Staff engagement

- A survey in 2015 was completed by 104 staff across the trust in which 86.1% of staff had been part of a team caring for a dying patient, 44.3% of those were unexpected deaths.
- Staff were asked on a scale of 0-10 how well they felt supported after a death and the results were variable with the highest response of 21.7% at number 5 and staff were given the opportunity to comment on their experiences. The EoL and bereavement operational group reviewed the data and acknowledged that there were concerns from some staff with dealing with sudden and unexpected deaths. However at the time of inspection no actions or recommendations had been agreed.

- The latest NHS staff survey results for 2015 results showed that the overall engagement score was 4.0 which higher than the national average of 3.9. There were 1380 responses (59%) which indicated good staff engagement with the survey.
- The trust focussed on celebrating the achievements of staff both at an annual event and by having an employee of the month.
- The trust held regular listening into action meetings to capture staff feedback from all areas. This resulted in a number of projects across the hospital for example reducing the amount of inpatient moves and setting up an EPR prioritisation framework.

Innovation, improvement and sustainability

- The EoL dashboard was an ongoing development tool to review and measure performance and assist in identifying any areas of concern which could be addressed. The data was collected both internally and externally however data was not always updated and therefore could be inaccurate.
- End of life services participated in the national TRANSFORM programme aimed at improving quality of EoL care in the hospital setting and an EoL group work plan 2015 -2016 was in place with actions and future tasks along with timescales clearly documented for the provision of the service.

Outpatients and diagnostic imaging

Safe		**Good**	🟢
Effective			
Caring		**Good**	🟢
Responsive		**Good**	🟢
Well-led		**Good**	🟢
Overall		**Good**	🟢

Information about the service

A range of cardiac and respiratory outpatient and diagnostic services are provided by Liverpool Heart and Chest NHS Trust and the trust provides diagnostic imaging services to a neighbouring trust under a Service Level Agreement. A number of outpatient appointments are also offered at community locations.

The main outpatients and diagnostic imaging departments are located on the ground floor of the main hospital building and an additional inpatient x-ray service is provided on one of the surgical wards. Between February 2015 and January 2016 73,015 outpatient appointments were offered across the trust.

Liverpool Heart and Chest NHS Trust offer a combination of consultant and nurse-led clinics for a range of cardiac and respiratory specialities including respiratory medicine, pre-operative assessment, oncology and cystic fibrosis. A number of therapy led clinics are provided including cardiac rehabilitation and respiratory physiotherapy.

Liverpool Heart and Chest NHS Trust offers a range of diagnostic services to patients including: general x-ray, computerised tomography (CT) scans magnetic resonance imaging (MRI), ultrasound scanning and cardiac catheterisation.

We visited Liverpool Heart and Chest Hospital NHS Trust as part of a specialist inspection between the 26 and 29 April 2016 and inspected a number of outpatient and diagnostic services including cardiovascular, cystic fibrosis, pulmonary rehabilitation, pre-operative assessment, spirometry and radiology and diagnostic imaging services.

We spoke with 18 patients and relatives and 46 staff including nursing, medical, allied health professionals and managers. We received comments from people who contacted us about their experiences. We also reviewed the trust's performance data and looked at 10 individual care records.

Outpatients and diagnostic imaging

Summary of findings

rated the service good because:

- Safety procedures and maintenance contracts were in place for specialist equipment. Radiation protection and medical physics support were available and policies and procedures could be accessed by all staff.

- All medicines were stored securely and medical records were available for all patients in outpatient clinic.

- Patients attending outpatients and diagnostic imaging departments received care and treatment that was evidence based and followed national guidance and staff worked together in a multi-disciplinary environment to meet patients' needs.

- Staff were competent to perform their roles and took part in benchmarking and accreditation schemes.

- Outpatient and diagnostic services were delivered by caring, committed and compassionate staff and care was planned that took account of patients' needs and wishes.

- The trust met national referral to treatment standards for incomplete pathways between June 2015 and February 2016 with the exception of December 2015 and consistently met the targets for cancer patients to be seen by a specialist within two weeks of urgent GP referral and to receive first definitive treatment within 31 days of diagnosis.

- The percentage of diagnostic waiting times over six weeks was consistently lower than the England average between March 2014 and January 2016 with the exception of November 2015 and the proportion of radiological investigations reported on for both inpatients and outpatients consistently met trust targets between September 2015 and February 2016.

- Arrangements were in place to accommodate people in vulnerable circumstances and bespoke exercise programmes to suit individual patients requirements were developed by the cardiac and respiratory rehabilitation service.

- Managers and clinical leads were visible and approachable and had a good knowledge of performance in their areas of responsibility. There was an open and honest culture within the service, morale was good and there was evidence of continuous improvement and development of staff and services.

However,

- Staff knew how to report incidents and received feedback but there was inconsistency in the types of incidents reported.

- Emergency resuscitation equipment was in place however some items were missing or past the expiry date within the radiology department.

- The trust had a number of patients who failed to attend for their appointments and the did not attend (DNA) rate was higher than the England average. A DNA policy was in place however this had been scheduled for review in March 2016. 44% of clinics started late and 41% of patients waited over 30 minutes to see a clinician.

- The trust consistently breached the target for 85% of patients to wait less than 62 days from urgent GP referral to starting treatment between quarter 4 of 2013/14 and quarter 3 of 2015/16. However managers told us that this was due to delays in receiving referrals from other providers and data provided by the trust supported this.

Outpatients and diagnostic imaging

Are outpatient and diagnostic imaging services safe?

Good ●

We rated the service good because:

- Incidents were discussed at monthly divisional governance meetings and information and lessons learnt were shared with staff.
- Safety procedures were in place in radiology and could be accessed by all staff using a bespoke information technology system. Radiation Protection Supervisors were appointed in each clinical area and details of Medical Physics support were available to staff.
- Policies and procedures were in place for the prevention and control of infection and maintenance contracts were in place to make sure specialist equipment was serviced regularly.
- All medicines in outpatients were found to be in date and stored securely in locked cupboards and prescription pads were stored securely and usage tracked.
- An electronic patient record (EPR) was used and plans were in place to mitigate any risk in the case of disruption to the system.
- Staff were aware of their safeguarding roles and responsibilities and knew how to raise matters of concern appropriately.
- Staff were able to describe the procedure if a patient became unwell in their department and knew how to locate the major incident policy on the intranet.

However,

- Although staff knew how to report incidents there was inconsistency in the types of incidents reported for example, some staff members told us they did not always complete an incident report if a patient had been aggressive.

- Emergency resuscitation equipment was in place however some items were missing or past the expiry date within the radiology department.

Incidents

- No serious incidents were reported between March 2015 and February 2016.

- Data from the trust showed there were four radiation incidents recorded between December 2014 and the time of our inspection. Minutes from the Radiation Safety Committee meeting held in April 2016 indicated incidents were discussed and reported internally and externally as required following consultation with the Radiation Protection Advisor (RPA).
- The diagnostic department had developed a bespoke computer programme which contained all departmental policies and procedures. Details of radiation incidents with action plans and RPA reports were stored on the system and accessible to all staff.
- Incidents were reported using an electronic reporting system. Staff could describe how to report incidents and reported receiving feedback at monthly team meetings however there was inconsistency with the types of incidents reported as some staff advised that they would not report near misses.
- Incidents were discussed at monthly divisional governance meetings and information and lessons learnt were disseminated to staff via staff meetings and trust wide email. Staff could describe examples of previous incidents that had occurred across the trust.
- Staff were aware of duty of candour and could describe circumstances when it would be exercised. 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.

Cleanliness, infection control and hygiene

- All of the clinical areas we visited were visibly clean and tidy.
- Completed cleaning checklists were observed in outpatient and radiology departments however these were not consistently completed in the outpatients department. Between 02/02/16 and 29/03/16 checklists for consulting room 16 had eight entries missing and consulting room17 had five entries missing. Several other completed cleaning checklists were observed but did not identify which consulting area they related to.
- Policies and procedures for the prevention and control of infection were in place and staff adhered to "bare below the elbow" guidelines. Hand gel was readily available in all clinical areas and we observed staff using it.

Outpatients and diagnostic imaging

- Stickers were placed on equipment to inform staff at a glance that equipment had been cleaned and we saw evidence of this being used across the departments we visited.
- Arrangements were in place for the handling, storage and disposal of clinical waste. Sharps bins were noted to have been signed and dated when assembled.
- Staff in radiology could describe the process when patients attended with suspected communicable diseases or requiring isolation including the use of protective equipment, deep cleaning following the procedure and scanning patients at the end of the list, if possible.
- Hand hygiene audits completed between September 2015 and December 2015 indicated that outpatient and diagnostic departments consistently achieved the target compliance rate of 95%.
- The trust performed better than the England average for cleanliness in the patient-led assessments of the care environment (PLACE) audits for 2013, 2014 and 2015.
- Within the outpatient and imaging departments curtains were used to screen patients in the waiting and consultation areas. We did not see any indication on the curtains to advise when they had been changed and not all staff were aware of the schedule.

Environment and equipment

- The outpatients department was undergoing refurbishment during our inspection and plans were in progress to provide additional consulting and diagnostic rooms, alter seating arrangements in the waiting room and provide a self-check in facility. Despite the work in progress the department continued to provide an outpatient service.
- Maintenance contracts were in place to ensure specialist equipment was serviced regularly and faults repaired and we saw evidence of quality assurance for diagnostic equipment.
- Safety testing for equipment was in use across outpatients and diagnostics and the equipment we reviewed had stickers that indicated testing had been completed and was in date.
- Clear signage and safety warning lights were in place in the x-ray departments to warn people about potential radiation exposure.

- Occupational exposure to radiation was monitored for radiology staff. This ensured that the amount of radiation staff were exposed to as part of their work was checked.
- Personal protective equipment such as safety glasses and gloves were observed and accessible.
- Emergency resuscitation equipment was in place and trolleys we reviewed were checked on a daily and weekly schedule. However, the trolley located in the ct and general area of x-ray was found to have some items missing or past the expiry date including sensor electrodes, gloves, stethoscope and secondary drugs box. This was highlighted to staff during our inspection and immediate action was taken.
- Portable oxygen and suction equipment was available in the x-ray department however wall mounted oxygen and suction points within main x-ray, ultrasound and MRI departments were missing items of equipment such as tubing and masks. This meant that this emergency equipment was not ready for immediate use for patients if required. This was also brought to the attention of staff.
- Some expired dressings were observed in the clean utility room within the outpatients department.

Medicines

- All medicines in outpatients were found to be in date and stored securely in locked cupboards as appropriate, and in line with legislation.
- No controlled drugs were stored in the outpatients department.
- Prescription pads were stored securely and usage tracked.
- Some specialist nurses in outpatients were registered nurse prescribers.Nurse prescribers are qualified nurses who have undertaken a recognised Nursing and Midwifery Council accredited prescribing course through a higher education establishment.
- Medicine cupboard keys were held by the qualified nurses in charge in the department.

Records

- The trust used an electronic patient record (EPR) and plans were in place to mitigate any risk in the case of disruption to the system.

Outpatients and diagnostic imaging

- We reviewed 10 sets of patient records in the outpatients department. All contained details of past medical history, allergies, infection control, medicines and discharge planning. Evidence of consent was also observed as completed and appropriate.

Safeguarding

- Safeguarding policies and procedures were in place across the trust. These were available electronically for staff to refer to. Staff were aware of their roles and responsibilities and knew how to raise matters of concern appropriately
- Staff described how they had dealt with safeguarding incidents and how a recent referral had been initiated to social care.
- The trust target for completion of safeguarding training was 95%. Trust data showed the safeguarding training rates for nursing staff and healthcare assistants in outpatient clinics for safeguarding children level one was 100% and level two was 93% and 57% respectively. Safeguarding training rates for radiology staff were 100% for level 1 and 100% for health care assistants for level 2.
- Training rates for safeguarding adults for nursing staff and healthcare assistants in outpatient's clinic was 86% for part A and 64% and 71% for part B respectively.
- For all staff in radiology, cardiac diagnostics and pulmonary function part A was100% and healthcare assistants for level B was 93%.
- Safety procedures were observed in radiology to ensure the right patient got the right scan at the right time.
- Staff in catheter laboratory used the World Health Organisation (WHO) Surgical Safety Checklist adapted. This aims to reduce harm during operative procedures by using consistently applied evidence-based practice and safety checks to all patients. The WHO checklist was observed in operation on a screen in catheter laboratory, a screen shot of the checklist was then sent to the electronic patient record.

Mandatory training

- Mandatory training was available via on-line courses as well as face to face and included subjects such as conflict resolution, fire, infection prevention and information governance. Essential training was also required which incorporated resuscitation, Mental Capacity Act and safeguarding children and adults.
- The trust target for mandatory training was 95%. Data from the trust indicated that cardiac diagnostics and pulmonary function staff had a compliance rate of 100% in all mandatory and essential training subjects. Radiology staff exceeded the trust target in all subjects with the exception of basic resuscitation.
- Nursing staff in outpatients exceeded the trust target in all subjects with the exception of conflict resolution, manual handling practical and pressure ulcer care.

Assessing and responding to patient risk

- Clear signs were in place informing patients and staff about areas where radiation exposure took place.
- Imaging requests for inpatients were completed electronically. Requests from general practitioners were a combination of electronic and paper referrals.
- Safety procedures were in place in radiology and we observed staff obtaining name, address and date of birth of patients prior to examinations which is a requirement of the Ionising Radiation (Medical Exposure) Regulations (IR(ME)R)(2000).
- Notices were in place in x-ray rooms to remind staff to 'pause and check' before scanning and we observed this in practice. Pause and check is a further process to ensure safe and effective patient care.
- Radiation Protection Supervisors were appointed in each clinical area within the diagnostic and imaging departments and details of Medical Physics support were available to staff on the SharePoint information system.
- Staff were able to describe the procedure if a patient became unwell in their department including calling the Medical Emergency Team (MET).
- If a patient required hospital admission following review and treatment by the MET team, transfer was arranged either to a ward or by ambulance to the nearest accident and emergency department depending on the nature of the patient's illness.

Nursing staffing

- Outpatient clinics were staffed by a combination of specialist and outpatient nurses.
- A team of clinical nurse practioners worked alongside outpatient staff to provide nurse-led pre-assessment clinics.
- Outpatient nurse staffing was planned in advance to manage the workload.
- A matron, a clinical nurse practitioner team leader and band 6 outpatient manager were in post within the outpatients department.

Outpatients and diagnostic imaging

Medical staffing

- The radiology department was staffed by consultant radiologists. Between 5pm and 9am all diagnostic imaging was reported by registrars in the radiology collaborative hub based on site.
- On call consultant cover was provided 24 hours per day, seven days a week.
- There was a sufficient number of medical staff to support outpatient services. We found that the majority of clinics were covered by consultants and their medical teams.

Allied Health Professionals

- Radiographers provided a 24 hour, seven day service.
- The trust had three band 5 radiographer vacancies at the time of our inspection. This had been identified as a risk on the risk register however recruitment was in progress.
- Cardiac diagnostic services were provided by a team of specialist technicians and exercise physiologists delivered bespoke pulmonary and cardiac rehabilitation programmes.

Major incident awareness and training

- The trust had a major incident policy which listed key risks that could affect the provision of care and treatment.
- Staff members were aware of the policy and how to locate it on the trusts intranet and in paper format within the outpatient department.
- Staff told us that any changes to the major incident policy were discussed in team meetings.

Are outpatient and diagnostic imaging services effective?

- Patients attending outpatients and diagnostic imaging departments received care and treatment that was evidence based and followed national guidance.
- Staff worked together in a multi-disciplinary environment to meet patients' needs. Specialist nurses were available in a wide range of specialities.
- Staff were competent to perform their roles and took part in benchmarking and accreditation schemes. Discrepancy meetings were held in radiology to facilitate collective learning.

- Information relating to a patient's health and treatment was available from relevant sources before a clinic appointment and staff had regional access to previous x-ray images. Information was shared with the patient's GP following hospital attendance to ensure continuity of care.
- The trust rate of follow up appointments in relation to new appointments was higher than the England average from August 2015. This was due to the speciality of the service provided. As patient groups included those with long term conditions such as Cystic Fibrosis [CF]. As these patients will require lifelong follow up.

Evidence-based care and treatment

- Care and treatment within the outpatient and diagnostic imaging department was delivered in line with evidence-based practice. Policies and procedures followed recognisable and approved guidelines such as the National Institute for Health and Care Excellence (NICE).
- Staff described the use of NICE protocols and guidelines for scanning patients with cancer or who required an aortic CT scan.
- Exercise physiologists had developed quality standards underpinned by evidence based guidelines and clinical nurse practitioners used protocols based on NICE guidance for pre-assessment of surgical patients.
- Audits of compliance with Ionising Radiation (Medical Exposure) Regulations 2000 (IRMER) were completed and Radiation Safety Committee meetings were held annually to monitor radiation safety throughout the trust.
- Diagnostic reference levels (DRL's) audits took place to ensure patients were being exposed to the correct amount of radiation for an effective, but safe scan for each body part.
- Staff in catheter laboratory had worked with the equipment manufacturer to enable a reduction in radiation and improvement in quality of images. This meant patients' exposure to radiation could be reduced.
- Heart failure specialist nurses took part in the National Heart Failure Audit.This monitors the care and treatment of patients in England and Wales with acute heart failure.
- Staff meetings were held in outpatients and radiology to share information and promote shared learning.

Pain relief

Outpatients and diagnostic imaging

- Analgesia could be prescribed for individual patients in outpatient's clinic as a single dose prescription using a patient specific direction.

Patient outcomes

- The trust rate of follow up appointments in relation to new appointments was higher than the England average from August 2015.
- Discrepancy meetings were held in radiology. The purpose of the meetings was to facilitate collective learning from radiology discrepancies and errors and therefore improve patient outcomes and safety. An annual report was prepared for submission to the Clinical Governance meeting and included discussion details and actions taken.
- Diagnostic imaging scans reported by registrars from the radiology hub were reviewed to ensure accuracy.
- Clinical nurse practitioners in the outpatients department were involved in national benchmarking and had hosted professionals from other hospitals nationally who were interested in replicating the pre-assessment service.
- Radiographers in the catheter laboratory were benchmarked through the Clinical Radiology Advisory Group.
- The cardiac diagnostic department had accreditation with the British Society of Echocardiography.This provides assurance of effective and consistant patient outcomes.

Competent staff

- Competency assessments were in place for outpatients and diagnostics and induction processes were in place for new staff.
- Clinical nurse practitioners attended additional clinical updates for their role on subjects such as obtaining consent, thoracic surgery care and prescribing.
- Each catheter laboratory had specific induction processes for staff and weekly education sessions took place. This ensured that staff were supported in their role.
- All exercise physiologists were qualified to Masters level and some ECG technicians had personal advanced accreditation with the British Society of Echocardiography.

- Student training logs were observed in radiology and examples provided of inter- professional learning included annual updates from Cystic Fibrosis specialist nurses.
- Staff identified their training needs through the trusts annual appraisal process and the trust target was 85%.
- Data from the trust indicated that appraisal rate for outpatients was 100% and 92% for radiology.
- Staff told us they felt supported to develop in their roles.
- Managers described how they managed poor performance using measures such as weekly meetings, competency reviews, formulation of action plans and monitoring.

Multidisciplinary working

- The diagnostic imaging and outpatients departments were staffed by a range of professionals working together as a multi-disciplinary team to provide a comprehensive service to patients.
- Specialist nurses were in post and provided a wide range of nurse-led clinics including heart failure, cystic fibrosis, oxygen therapy and pre-assessment.
- One stop clinics were available for assessment prior to procedures. Patients attended for an holistic assessment as well as all necessary blood tests and investigations and received advice regarding hospital admission and any alterations to medication.
- A multi-disciplinary rapid access lung cancer clinic was held weekly where patients with a suspected or definite diagnosis could attend for initial consultation, investigations, results and see treatment specialists on the same day. This ensured patients received prompt results which helped to reduce anxiety and also prevented the need for patients to return for several appointments.
- Multi-disciplinary clinics were held for patients with cystic fibrosis and included medical staff, specialist nurses, dietician, physiotherapist, pharmacist and psychologist.
- Multi-disciplinary meetings were held within the cardiac diagnostics department and cystic fibrosis clinic and multi-disciplinary working was described in cardiac and pulmonary rehabilitation.
- Letters were sent from the outpatients department to patient's GPs to provide a summary of the consultation and radiology results were sent electronically or faxed.

Outpatients and diagnostic imaging

- Data from the trust showed that in March 2016 56% of letters were sent to GPs within three days following outpatient appointments and 90% were sent within 12 days.

Seven-day services

- The diagnostic and imaging departments provided services such as blood tests and x-rays at the weekend. CT scanning and catheter laboratory provided an 24 hour on call service.
- There were no regular weekend clinic appointments in the outpatients department.

Access to information

- The radiology department used a nationally recognised system to report and store patient images. The system was used across the trust and allowed local and regional access to images.
- Previous images could be viewed by staff .
- Diagnostic results were provided electronically.
- Data from the trust showed availability of medical records for outpatient clinics was 100% between November 2015 and January 2016.
- Between February 2016 and April 2016 2% of clinics were cancelled. The main reason for cancelled clinics was unavailability of consultant.
- Staff were able to access information such as policies and procedures from the trust's intranet.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- Staff in outpatients and diagnostic imaging worked on the principle of implied consent.
- If written consent was required for more complex procedures this was obtained in out patient's clinic by medical staff or clinical nurse practitioners following additional training.
- Consent for surgical procedures was obtained by medical staff only.
- Clinical nurse practitioners described the process of assessing capacity when obtaining consent.
- Mental Capacity Act training had been attended by 100% of nursing staff in the outpatients department.

Are outpatient and diagnostic imaging services caring?

Good ●

We rated the service good because:

- Outpatient and diagnostic services were delivered by caring, committed and compassionate staff. We observed how staff interacted with patients and their families and found them to be polite, friendly and helpful.
- The main reception area in outpatients had measures in place to respect patient confidentiality at check in.
- The patients we spoke with were positive about the way staff looked after them. Care was planned that took account of patients' needs and wishes.
- The trust had a number of clinical nurse specialists available for patients and their families to talk to about their condition.
- Psychological and emotional support was available for patients in cystic fibrosis clinic.

Compassionate care

- We witnessed reception and nursing staff being polite and helpful and introducing themselves by name.
- The main reception area in outpatients had measures in place to respect patient confidentiality at check in despite being in the process of refurbishment.
- The trust had a Chaperone policy in place, staff could discuss its application and could locate it on the intranet.
- Staff described how patients were given additional time during consultations particularly when receiving difficult news.
- We spoke with patients and families who told us staff were "polite and caring" and they "couldn't fault the care".
- A patient satisfaction survey completed in radiology in February 2016 showed that 96.6% of patients rated the courtesy of the x-ray staff as excellent and 99.3% said they were treated with respect and dignity all the time.
- The NHS Friends and Family Test assesses whether patients would recommend a service to their friends and family. Data from the outpatients department showed that between November 2015 and April 2016 the number of patients who would recommend the hospital to family and friends ranged from 42% to 98%.

Outpatients and diagnostic imaging

Understanding and involvement of patients and those close to them

- Patients were informed following diagnostic investigations when they should contact their GP for the results
- Six out of eight patients who had previously attended for appointments told us they always received copies of letters sent to their GP following a consultation.
- Patients told us they understood when they would receive their tests results and next appointment and how they could contact the service by telephone if needed.

Emotional support

- The trust had a wide range of clinical nurse specialists available for patients to talk to about their condition.
- Patients told us they felt involved in their care planning and were provided with contact numbers for advice in between appointments.
- Psychological support was available for patients who attended cystic fibrosis clinic.

Are outpatient and diagnostic imaging services responsive?

Good ●

We rated the service good because:

- Patients told us they received instructions with their appointment letters and were given written information as needed.
- Staff described how people in vulnerable circumstances were accommodated in the department and their appointment could be escalated if required.
- Access to interpreting services could be arranged by telephone for those patients who did not speak English and provision was made for bariatric patients.
- Within the outpatient areas there was a range of information leaflets and literature available for patients to read about a variety of conditions and support services available.They were only in English but could be ordered in other languages or alternative formats if required.
- The trust met national referral to treatment standards for incomplete pathways between June 2015 and February 2016 with the exception of December 2015.

- The trust consistently met the targets for cancer patients to be seen by a specialist within two weeks of urgent GP referral and to receive first definitive treatment within 31 days of diagnosis.
- The percentage of diagnostic waiting times over six weeks was consistently lower than the England average between March 2014 and January 2016 with the exception of November 2015.
- The proportion of radiological investigations reported on for both inpatients and outpatients consistently met trust targets between September 2015 and February 2016.

However;

- The trust consistently breached the target patients to wait less than 62 days from urgent GP referral to starting treatment however managers told us this was due to delays in receiving referrals from other providers.
- The did not attend rate was higher than the England average.
- 44% of clinics started late and 41% of patients waited over 30 minutes to see a clinician

Service planning and delivery to meet the needs of local people

- We observed clear signposting through the hospital to the outpatients and diagnostic imaging departments and the sign at the entrance to the radiology department was displayed with large lettering to increase visibility for patients.
- Patients told us they received instructions with their appointment letters and were given written information as needed,
- The x-ray department had changing rooms that led straight into the scanning room so that patients did not need to wait in an open waiting room in a state of undress.
- Waiting areas had sufficient seating available with access to toilets and drinking water. A shuttle bus service was available from the car park.
- A vending machine was available in the outpatients department and a tea bar and self-check- in facility was planned for the newly refurbished outpatient waiting area.

Outpatients and diagnostic imaging

- Pagers were available in general outpatient clinic to allow service users to leave the waiting area and be recalled when it was time for their consultation, however we did not see any signs informing patients of this facility.
- A mobile x-ray unit for inpatients was in operation on Cedar ward which meant patients did not always have to go to main x-ray for investigations.

Access and flow

- The trust met the national standard of 92% for referral to treatment rates each month for incomplete pathways between June 2015 and February 2016 with the exception of December 2015 when the rate fell to 90% .Incomplete pathways are waiting times for patients waiting to start treatment at the end of the month.
- The trust consistently met the target for 93% of cancer patients to be seen by a specialist within two weeks of urgent GP referral between quarter 4 of 2013/14 and quarter 3 of 2015/16.
- The trust consistently met the target for 96% of cancer patients to receive first definitive treatment within 31 days of diagnosis between quarter 4 of 2013/14 and quarter 3 of 2015/16.
- The trust consistently breached the target for 85% of patients to wait less than 62 days from urgent GP referral to starting treatment between quarter 4 of 2013/14 and quarter 3 of 2015/16 before breach reallocation. The trust adheres to the locally agreed Cheshire and Merseyside post reallocation measure. This specifically takes effect when the trust receives a patient from another provider after day 42 of the pathway. When this measure was applied the trust breached the target for Q1 2015/16 however met the target for quarter 2, 3 and 4 2015/16.
- Between January 2016 and March 2016 the trust met the national standard for diagnostic imaging waiting times (that is less than 1% of patients waiting more than six weeks) and the percentage of diagnostic waiting times over six weeks was consistently lower than the England average between March 2014 and January 2016 with the exception of November 2015.
- The proportion of inpatient radiological investigations reported on within 24 hours consistently met the trust target of 99.5% between September 2015 and March 2016.The proportion of outpatient radiological

investigations reported on within 120 hours (5 days) met the trust target of 99.5% for every month between September 2015 and February 2016 however this fell to 98.2% in March 2016.
- Patients were able to choose their appointment date and time through the Choose and Book system.
- Letters were sent to patients two weeks before their appointment as a reminder.
- All patients attending for MR scans were telephoned the week before to obtain additional clinical information and confirm the appointment.
- The trust had a number of patients who failed to attend for their appointments and the did not attend (DNA) rate was higher than the England average. A DNA policy was in place however this had been scheduled for review in March 2016.
- Between November 2015 and April 2016 the DNA rate ranged from 8.7% to 12.8% for first appointments and 8.6% and 11.8% for follow up appointments. Records of patients who had not attended were reviewed by the consultant following clinic and a decision made regarding further appointments.
- Managers told us that the self-check in facility planned as part of the outpatient refurbishment plan would incorporate a text messaging service to remind patients about their appointment.
- The trust target for patients waiting less than 20 minutes for radiological investigations following arrival in the department was 90%. Between September 2015 and March 2016 performance ranged from 87.5% to 96.3%.
- Data from the trust showed that 44% of clinics started late and 41% of patients waited over 30 minutes to see a clinician. Clinicians not arriving on time to start clinic was recorded on the departmental risk register however staff told us this may be due to an emergency on the wards delaying the arrival of medical staff to the department or patients requiring cardiac diagnostic investigations prior to consultation.
- Announcements were made by staff in outpatient waiting areas to advise patients of delays.

Meeting people's individual needs

- Staff described how people in vulnerable circumstances were accommodated in the department and their appointment could be escalated if required.

Outpatients and diagnostic imaging

- Patients with learning disabilities were able to attend diagnostic departments with family members prior to attending for investigations to become familiar with equipment and procedures.
- We observed a telephone contact from a patient requesting advice. Following consultation with medical staff, urgent investigations were arranged and the patient was admitted to the hospital from outpatient clinic the same day.
- Access to interpreting services could be arranged by telephone for those patients who did not speak English. Notices were displayed advising patients of this service in a variety of languages.
- If staff were alerted to a patient's requirements, face to face translators could be booked in advance; however we did not see this system in use as we did not observe any patients requiring translation services during our inspection.
- Provision for bariatric patients was available within radiology including suitable equipment and gowns.
- Patients attending for magnetic resonance (MR) scanning were provided with a tablet computer that gave information about the procedure, staff reported that this was particularly beneficial for patients who were claustrophobic.
- Within the outpatient areas there was a range of information leaflets and literature available for patients to read about a variety of conditions and support services available.
- The cardiac and respiratory rehabilitation service developed bespoke exercise programmes to suit individual patient's requirements.

Learning from complaints and concerns

- Initial complaints were dealt with by managers in the outpatients and diagnostics departments in an attempt to resolve issues locally; however if this was unsuccessful information was provided about the Customer Relations Team.
- Staff we spoke with knew how to sign post patients to the Customer Relations team should they wish to make a complaint and patients told us they knew how to make a complaint if needed.
- Details of complaints were discussed with staff in monthly team meetings.

- The trust had a complaints policy and between 1st February 2015 and 1st February 2016 one formal complaint was received by radiology, two by cardiac diagnostics and two by the outpatients department.

Are outpatient and diagnostic imaging services well-led?

Good ●

We rated the service good because:

- Managers had a good knowledge of performance in their areas of responsibility and understood the risks and challenges to the service.
- Managers and clinical leads were visible and approachable.
- Clinical governance meetings were held in radiology and outpatient departments.
- There was an open and honest culture within the service, morale was good and staff felt included in the refurbishment of the outpatients department.
- Patients' and staff views were actively sought and there was evidence of continuous improvement and development of staff and services.

Vision and strategy for this service

- The trust vision was "to be the best". Staff were aware of the vision and could describe the values which included patient and family centred care, accountability, continuous improvement and teamwork (PACT).
- An outpatient strategy plan had been developed to meet increased capacity and demand with the aim of delivering a more efficient service and improving patient experience and staff satisfaction.
- The outpatient department was led by a Matron supported by an outpatient manager. A team of clinical nurse practiners worked within the department led by a team leader.
- The radiology department was led by a manager supported by a number of area specific clinical leads.
- Staff told us that managers, clinical leads and the executive team were visible and approachable.

Governance, risk management and quality measurement

Outpatients and diagnostic imaging

- Monthly clinical governance meetings took place to discuss risks, incidents and key issues. Meeting minutes were reviewed and staff described examples of information that had been fedback.
- Radiation Safety Committee meetings were held annually to ensure that clinical radiation procedures and supporting activities in the trust were undertaken in compliance with ionising and non-ionising radiation legislation. Minutes and action plans were stored on SharePoint to enable all radiology staff to access them.
- The radiology and outpatients department recorded risks on the clinical services risk register.
- Quality and performance were monitored through a strategic dashboard and included data regarding quality and experience, workforce and service and innovation.This highlighted areas of effective performance and outcomes of quality improvement initiatives.

Leadership of service

- Managers had a good knowledge of performance in their areas of responsibility and they understood the risks and challenges to the service.
- Staff felt supported and valued in their role and told us the executive team were responsive to new ideas and innovation. Staff described the trust as "a community" and managers told us they were proud of their staff because "they treat our patients with dignity and really care for the patients".
- Monthly team meetings took place to ensure staff received information and feedback regarding incidents and complaints and were kept informed of developments within the trust.
- The matron in the outpatients department had been in post less than a year at the time of our inspection however staff told us that there had been positive changes since the appointment.

Culture within the service

- There was an open and honest culture within the service and staff were candid about the challenges they faced.Staff reported recent management changes had impacted in the outpatients department, however reported the team had now "settled".
- Morale in the outpatients department was reported to be improving following changes in leadership.
- We observed good team working in all the departments we visited.

Public engagement

- The views of patients were actively sought within outpatients and diagnostic imaging using the NHS Friends and Family Test and patient satisfaction surveys.Staff described feedback from a patient who had stated there was no handbag hook in the toilet. This was subsequently rectified by the estates department and contact made with the patient to advise of the action taken.
- An example of the new furniture planned for the refurbished outpatients department was observed in the waiting room with a notice encouraging patients to try it and give their views.
- In the cardiac and pulmonary rehabilitation waiting area we observed a "You said, we did" noticeboard that provided examples of changes in practice following patient feedback. This included development of home exercise booklets to support patients who had reported difficulty warming up and cooling down when performing exercise's at home.

Staff engagement

- A mission statement in radiology had been devised by staff. This provided staff with the opportunity to contribute to the vision for the department.
- Staff told us they felt involved in changes to processes and the environment within the outpatients department.
- The trust had engaged with Listening into Action. This is a systematic approach to promote staff engagement and staff described an open culture.
- Physical and psychological support services were available to staff and staff we spoke with, told us they were aware of how to access them.

Innovation, improvement and sustainability

- Clinical nurse practitioners had developed a pre-assessment outpatient service for completion of investigations and holistic patient assessment prior to hospital admission. This included obtaining consent for some medical procedures and medication management prior to any intervention or surgery.
- A bespoke information technology system had been developed in radiology allowing staff access to Radiation Committee Meeting minutes and performance data as well as staff competency information, policies and procedures.

Outstanding practice and areas for improvement

Outstanding practice

- The Critical Care clinical team had introduced a 'quick recovery' plan that had been designed to reduce the amount of time that was spent by patients in POCCU. This initiative was a nominated finalist for the Nursing Times Awards and was presented at the National Society of Cardiothoracic Surgeons conference. Audit data that had been collected for this suggested that it was both effective and beneficial for patient recovery.

- There was a trust safety huddle that was held on a daily basis and gave staff from the unit the opportunity to raise issues and concerns directly with the executive team.

- Medical services developed the lateral atrial appendage occlusion service (LAAO) which has the highest activity rates in the country and implemented the first leadless pacemaker. LAAO is a treatment to reduce the risk of atrial blood clots entering the bloodstream and causing a stroke.

- A number of staff received external awards for innovative projects; for example, for continuous glucose monitoring and the cardio version service.

- People living with a learning disability were offered pre-procedure appointments to help support them with the unfamiliar surroundings. There was also a hospital communication book and pictorial meal menus.

- On the holly unit, friends and relatives were given a pager so they could go off the unit and know when the patient's procedure was over so they could be reunited as soon as possible.

- When patients arrived by ambulance for a procedure staff responded by meeting them in the ambulance and explained everything to them and their relatives whilst waiting for the doctors to get ready for the procedure.

- The day case service had developed a bespoke lounge suit for patients to use on the holly unit. This ensured that patients' privacy and dignity was maintained and enabled them to stay with their relative or carer until they had their procedure.

- A bespoke information technology system had been developed in radiology allowing staff access to Radiation Committee Meeting minutes and performance data as well as staff competency information, policies and procedures.

- A pleasantly illustrated folder containing a 'thinking of you' card with a contact number for patient services, information about what to do following a death and the death certificate is given to the next of kin. Also the deceased patient's property was returned in a linen bag and jewellery was placed in a small purple organza pouch, which had personally been purchased by the SPCT nurse lead.

- We saw excellent examples of end of life compassionate care, which showed staff at the hospital going above and beyond their duty to meet the needs and wishes of both the patient and their loved ones. This included a funeral for a patient who had no next of kin, which was arranged and attended by staff; a wedding was arranged for a patient who was at the end of their life to enable the patient to marry their loved one on the POCCU. We were told of on example, where staff asked a patient who was dying whether there was anything she really wanted and she said she had never had her hair coloured or streaked. Staff arranged for a mobile hairdresser to attend the ward and dye her hair .

- On the cardiac catheter laboratory unit, we were shown a roomstaff told us, was always available for a deteriorating or deceased patient and their loved one to be together and a butterfly logo was placed on the door to promote dignity and privacy and notify all staff that a deceased patient and family were in the room

Outstanding practice and areas for improvement

Areas for improvement

Action the hospital SHOULD take to improve

- The management team should ensure that all risk assessments for the unit are updated in a timely manner and that there is a designated member of staff assigned to complete these.

- Management should ensure that improvements are made in how patients are managed while waiting to be discharged from the POCCU areas of the unit so that the Department of Health standard of same sex accommodation is met and that the privacy and dignity of patients are maintained. All mixed sex breaches must be reported as clinical incidents in line with trust policy.

- The POCCU unit should ensure that improvements are made to the number of delayed discharges from the unit.

- Staff should ensure that infection control procedures (hand washing) are followed in-between providing direct care and treatment to patients.

- The unit should improve compliance with safeguarding level 2 training for all nursing staff.

- The education team should consider the introduction of the cardiac advanced life support (CALS) course so that staff are aware of their roles in the event of an emergency situation.

- The management team should ensure that the policy for managing delirium is updated and that a policy for administering medication in end of life care should be implemented to ensure that up to date evidence based practice is followed.

- The trust should ensure that hazardous chemicals are stored appropriately in a locked cupboard when not in use.