

# University Hospitals of Leicester NHS Trust Leicester Royal Infirmary

## 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.

# Summary of findings

## Letter from the Chief Inspector of Hospitals

University Hospitals of Leicester NHS Trust is one of the biggest acute trusts in England. Formed in April 2000, it is a teaching trust which provides specialist and acute services to a population of around 100,00,000 patients throughout Leicester, Leicestershire and Rutland. The Trust's nationally and internationally-renowned specialist treatment and services in cardio-respiratory diseases, cancer and renal disorders reach a further two to three million patients nationally.

The trust operates acute hospital services from three main hospital sites:

- Leicester Royal Infirmary
- Leicester General Hospital
- Glenfield Hospital

Leicester Royal Infirmary is close to Leicester city centre and provides Leicestershire's only emergency department. The hospital has approximately 982 inpatient beds and 66 day-case beds.

We served a warning notice under Section 29A of the Health and Social Care Act 2008 in December 2017. The warning notice was served as we found evidence to suggest the quality of health care in relation to management of insulin for diabetic patients' required significant improvement. We carried out an unannounced focused inspection on 29 May 2018 to follow up actions taken following the issue of the warning notice and to see if significant improvements had been made.

We inspected the safe domain in the core service of Medicine at this location. We did not inspect any other core services or wards at this hospital. This was a focused inspection. Information for the location as a whole can be found in our previous report published in March 2018. This can be accessed at [http://www.cqc.org.uk/sites/default/files/new\\_reports/AAAH1561.pdf](http://www.cqc.org.uk/sites/default/files/new_reports/AAAH1561.pdf).

Our key findings for this focussed inspection were as follows:

- There had been improvements in the care of patients with diabetes since our last inspection, however, further improvement was required in the monitoring and embedding of the actions taken as we found that people did not always receive their medicines as prescribed. The process of prescription of when required insulin was inconsistent.
- Medicine fridge temperatures were not always checked in line with trust guidance. Staff could not be assured medicines were stored at a correct temperature.
- Staff did not always complete fluid balance charts meaning staff did not always have the complete information they needed before providing care and treatment.
- Some wards demonstrated a 25% compliance with the hand hygiene audit. Others did not manage or sustain improvement in the audits.
- Entrance and exit areas to ward 43 remained cluttered and a hazard for rapid entry or exit to the ward.
- Staff were not consistent in their use of I am clean stickers.

However:

- There was a clearly defined incident reporting process to keep people safe, although staff did not always report staffing concerns.

# Summary of findings

- The trust were increasing data collection to monitor at risk patients and monitor trends in the incidents around insulin safety.
- Ward areas were visibly clean and infection rates were better than the national average.
- We saw some improvements in the care of patients with diabetes.
- Safeguarding adults at risk was given sufficient priority.
- Patient's risk assessments were predominantly completed appropriately and patient observations were completed and where necessary escalated appropriately.

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

Importantly, the trust must:

- The trust must ensure that all staff follow the prescription and trust guidance when monitoring patients blood glucose levels and administering as required insulin.
- The trust must ensure medicine fridge temperatures are recorded daily to ensure medicine are stored at the correct temperature.
- The trust must ensure staff have up to date mandatory training.
- The trust must ensure staff complete accurate fluid balance charts to support safe care and treatment of patients.

In addition the trust should:

- The trust should ensure staff follow a consistent process when prescribing as required (PRN) insulin to patients.

**Professor Ted Baker**

**Chief Inspector of Hospitals**

# Summary of findings

## Our judgements about each of the main services

### Service

**Medical care  
(including  
older  
people's  
care)**

**Requires improvement**

### Rating



### Why have we given this rating?

- Despite improvements since our last inspection, people did not always receive their medicines as prescribed. The process of prescription of when required insulin was inconsistent. Patients did not receive prescribed insulin in response to increasing blood glucose levels.
- Medicine fridge temperatures were not always checked in line with trust guidance. Staff could not be assured medicines were stored at a correct temperature.
- Staff did not complete fluid balance charts meaning staff did not always have the complete information they needed before providing care and treatment.
- There were periods of understaffing which the trust were unable to address.
- Some wards demonstrated a 25% compliance with the hand hygiene audit. Others did not manage or sustain improvement in the audits.
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# Leicester Royal Infirmary

## Detailed findings

### Services we looked at

Medical care (including older people's care)

# Detailed findings

## Contents

### Detailed findings from this inspection

	Page
Background to Leicester Royal Infirmary	7
Our inspection team	7
How we carried out this inspection	8
Facts and data about Leicester Royal Infirmary	8
Action we have told the provider to take	20

## Background to Leicester Royal Infirmary

University Hospitals of Leicester NHS Trust is one of the biggest acute trusts in England. Formed in April 2000, it is a teaching trust which provides specialist and acute services to a population of around 100,000,000 patients throughout Leicester, Leicestershire and Rutland. The Trust's nationally and internationally-renowned specialist treatment and services in cardio-respiratory diseases, cancer and renal disorders reach a further two to three million patients nationally.

The trust operates acute hospital services from three main hospital sites:

- Leicester Royal Infirmary
- Leicester General Hospital
- Glenfield Hospital

Leicester Royal Infirmary is close to Leicester city centre and provides Leicestershire's only emergency department

The trust also provides services from 15 other locations and community hospitals; this includes maternity services at St Marys Birth Centre.

The trust employs around 15,000 staff

The trust has 90 wards across the three hospital sites; 1820 inpatient beds and 181 day-case beds including 149 maternity beds. Each week the trust runs 1155 outpatient clinics.

The health of people living within Leicestershire and Rutland is generally better than the England average. Deprivation for both areas is lower than the England average. Deprivation is higher in Leicester and also has a higher percentage of children living in poverty at 26.9%, compared to 11.5% for Leicestershire and 7.8% within Rutland. However the life expectancy for all three areas is higher than the England average.

The trust's main Clinical Commissioning Groups (CCG) are Leicester City CCG, West Leicestershire CCG and East Leicestershire and Rutland CCG.

## Our inspection team

Our inspection team was led by:

**Inspection Manager:** Simon Brown, Care Quality Commission.

The team included two additional CQC inspectors and two assistant inspectors.

# Detailed findings

## How we carried out this inspection

We served a warning notice under Section 29A of the Health and Social Care Act 2008 in December 2017. The warning notice was served as we found evidence to suggest the quality of health care in relation to management of insulin for diabetic patients' required significant improvement. We carried out an unannounced focused inspection on 29 May 2018 to follow up actions taken following the issue of the warning notice and to see if significant improvements had been made.

During the inspection, we carried out a number of activities to gather evidence, including a review of patient records, medicine prescriptions, observations charts and speaking with a wide variety of trust staff in a number of roles. We also requested specific information from the trust at the time of our inspection visit.

## Facts and data about Leicester Royal Infirmary

The medical care service at Leicester Royal Infirmary provides care and treatment for ten specialities:

Care of the Elderly

Clinical Oncology

Diabetology

Gastroenterology

General Medicine Assessment Unit and Acute Care Bay Beds

Haematology

Infectious Diseases

Neurology

Rheumatology

Dermatology

At Leicester Royal Infirmary, there are 537 beds across 24 wards.

(Source: Routine Provider Information Return - Acute-Sites)

The trust had 123,333 medical admissions from July 2016 to June 2017. Emergency admissions accounted for 50,953 admissions (40.6%), 3,535 (2.8%) were elective, and the remaining 70,845 (56.5%) were day case.

Admissions for the top three medical specialties were:

- Gastroenterology: 29,363
- General medicine: 17,224
- Cardiology: 16,217

(Source: HES)

### Notes

This was a focused inspection of Medicine at this location. We only looked at the safe domain. We have rated the safe domain at this inspection only. Our previous ratings across the remaining domains in our published report (March 2018) remain the same.



# Medical care (including older people's care)

Safe

Requires improvement



Overall

Requires improvement



## Information about the service

The medical care service at Leicester Royal Infirmary provides care and treatment for ten specialities:

Care of the Elderly, Clinical Oncology, Diabetology, Gastroenterology, General Medicine Assessment Unit and Acute Care Bay Beds, Haematology, Infectious Diseases, Neurology, Rheumatology and Dermatology

At Leicester Royal Infirmary, there are 537 beds across 24 wards.

The trust had 123,333 medical admissions from July 2016 to June 2017. Emergency admissions accounted for 50,953 admissions (40.6%), 3,535 (2.8%) were elective, and the remaining 70,845 (56.5%) were day case.

Admissions for the top three medical specialties were:

- Gastroenterology: 29,363
- General medicine: 17,224
- Cardiology: 16,217

(Source: HES)

During this inspection we visited wards 16, 26, 32, 33, 36, 37, 38, 40, 42 and 43.

We also:

- spoke with 16 members of staff including specialist nurses, ward managers, matrons, doctors, nurses and support staff.
- Reviewed 19 medical and nursing records
- Reviewed 20 insulin prescription charts
- Reviewed 14 observation records

## Summary of findings

We rated safe as requires improvement because:

- Despite improvements since our last inspection, people did not always receive their medicines as prescribed. The process of prescription of when required insulin was inconsistent. Patients did not receive prescribed insulin in response to increasing blood glucose levels.
- Medicine fridge temperatures were not always checked in line with trust guidance. Staff could not be assured medicines were stored at a correct temperature.
- Staff did not complete fluid balance charts meaning staff did not always have the complete information they needed before providing care and treatment.
- There were periods of understaffing which the trust were unable to address.
- Some wards demonstrated a 25% compliance with the hand hygiene audit. Others did not manage or sustain improvement in the audits.
- Entrance and exit areas to ward 43 remained cluttered and a hazard for rapid entry or exit to the ward.
- Staff were not consistent in their use of I am clean stickers.

However:

- There was a clearly defined incident reporting process to keep people safe, although staff did not always report staffing concerns.
- The trust were increasing data collection to monitor at risk patients and monitor trends in the incidents around insulin safety.
- Ward areas were visibly clean and infection rates were better than the national average.
- We saw some improvements in the care of patients with diabetes.
- Safeguarding adults at risk was given sufficient priority.

# Medical care (including older people's care)

- Patient's risk assessments were predominantly completed appropriately and patient observations were completed and where necessary escalated appropriately.

## Are medical care services safe?

Requires improvement



### Incidents

- An incident reporting policy, which included the incident grading system and external and internal reporting requirements was available to staff. Incidents, accidents and near misses were reported through the trust's electronic reporting system.
- Staff we spoke with demonstrated a good understanding of the incident reporting system, however, staff explained that a lack of staffing was not always reported due to lack of changes as a result of it, and time constraints. Staff described a process of shared learning from incidents across the trust at ward meetings and daily handovers. In addition, the trust had developed a 'Patient Safety Portal' that all staff could access through the trust intranet. This contained a resource of safety learning videos, external links and reports and a one-page learning bulletin for every serious incident.
- The trust shared National Patient Safety Alerts throughout the wards and included in the staff briefings. In addition, they produced a Serious Incident Bulletin for shared learning across the trust and placed in staff areas.
- There were 1,514 incidents reported between February and April 2018 of these 1,288 were classified as no harm, 217 as minor harm, seven as moderate harm and two as major harm. There had been no incidents reported that had resulted in death.
- There had been no serious incidents or never events recorded in this core service during this time period
- Between 1st February 2018 and 30th April 2018, staff at Leicester Royal Infirmary (LRI) reported 17 insulin safety incidents.
- Monthly morbidity and mortality (M&M) meetings were held within the clinical management group. These meetings reviewed patient deaths and treatment complications in order to develop improvements to patient safety and aid professional learning. Doctors we spoke with confirmed they attended these

# Medical care (including older people's care)

meetings. We reviewed a number of M&M meeting for minutes for April and May across a number of specialities within medicine. We saw that meetings were well attended. Minutes were clear and there were clearly documented actions to improve learning and patient safety, for example in the mortality and morbidity meeting minutes for stroke an action indicated there was to be further discussions about updating the TIA pathway.

- Never Events are serious patient safety incidents that should not happen if healthcare providers follow national guidance on how to prevent them. Each Never Event type has the potential to cause serious patient harm or death but neither need have happened for an incident to be a Never Event. Between November 2017 and April 2018, the trust had no never events relating to medicine at LRI.
- The duty of candour is a regulatory duty relates to openness and transparency and requires providers of health and social care services to notify patients (or other relevant persons) of certain 'notifiable safety incidents' and provide reasonable support to that person.
- Staff were aware of their responsibilities with regards to duty of candour and gave examples of when they had applied this.

## Safety thermometer

- The Safety Thermometer is used to record the prevalence of patient harms and to provide immediate information and analysis for frontline teams to monitor their performance in delivering harm free care. Measurement at the frontline is intended to focus attention on patient harms and their elimination.
- Data collection takes place one day each month – a suggested date for data collection is given but wards can change this. Data must be submitted within 10 days of suggested data collection date.
- Data from the Patient Safety Thermometer showed that LRI medical wards reported 22 new pressure ulcers, 1 fall with harm, 24 new urinary tract infections in patients with a catheter and eight new acquired venous thrombosis episode (VTE, either deep vein

thrombosis- DVT, pulmonary embolism- PE or other) from February to April 2018. A VTE is a clot that forms within the veins and is often in the deep veins in the legs (DVT) or within the lungs (PE).

- Matrons provided a trust overview of metrics measured in the safety thermometer and quality dashboards for review by the executive board. Data was rated red, amber and green indicating values above the expected levels and discussed at the quality and outcomes committee meetings. We did not see the data displayed in all ward areas for patients and families to compare monthly performance.
- As part of an insulin safety action plan, the trust planned to add additional metrics to the safety dashboard. Five key metrics to monitor Insulin Safety had been agreed by the UHL Insulin Safety Task and Finish Group and will be presented in the form of a RAG rated dashboard. These were:
  - Number of instances of severe Hypoglycaemia (<3.0mmol/l)
  - Number of instances of severe hyperglycaemia (> 25.0mmol/L)
  - Prevalence of inappropriate missed doses of insulin
  - Compliance of Medical & dental staff compliance with Insulin Safety training (%)
  - Compliance of Registered Nurses, Midwives compliance with Insulin Safety training (%)

## Cleanliness, infection control and hygiene

- The trust had a dedicated infection prevention team (IPT) that worked across all three sites. The chief nurse held the role of director of infection prevention and control (DIPaC) and a consultant microbiologist was the lead infection prevention doctor.
- All clinical areas visited were visibly clean. We saw housekeepers in each area following cleaning schedules.
- Between April 2017 and April 2018, the trust reported four instances of Methicillin-resistant Staphylococcus aureus (MRSA), against a trajectory of zero avoidable cases. MRSA is a bacterium responsible for several difficult-to-treat infections.

# Medical care (including older people's care)

- Between April 2017 and March 2018, the trust reported 43 cases of methicillin-sensitive Staphylococcus aureus (MSSA). MSSA differs from MRSA due to the degree of antibiotic resistance.
- In the same period the trust reported 68 cases of Clostridium difficile (C.Difficile) against a trajectory of 60 cases. C. difficile is an infective bacterium that causes diarrhoea, and can make patients very ill.
- Between 1st February and 30th April 2018, medical services at LRI and Glenfield, reported one case of MRSA and sixteen cases of C.Diff.
- A root cause analysis was carried out for each MRSA blood stream infection.
- The trust infection prevention (IP) annual report compared trust figures with comparable organisations outside London. The trust infection rates were better than two of the three trusts compared with for MRSA and C diff.
- Infection outbreaks were reported as incidents to enable the IP nurses to feedback to staff. During our inspection, we saw greater support to wards during and after a norovirus infection outbreak to prevent further spread of infection and minimise service disruption. Norovirus is a stomach bug that causes nausea and vomiting. After an outbreak the IPT supported the development of a report which was presented at quality groups.
- Staff performed cleaning and hand hygiene audits. We reviewed the hand hygiene audit results for February, March and April 2018. Compliance was between 25% and 100%. Hand Hygiene scores were reviewed as part of the speciality medicine; infection prevention confirm and challenge meetings. These were held quarterly by the CMG. Each ward manager and matron presented their scorecard and IP results to the deputy head of nursing and CMG infection prevention nurse. Other colleagues from within the organisation were invited depending on the results of the data. Staff told us this gave opportunity to celebrate results or to focus on actions required. We saw that some wards did not demonstrate an improvement in the audit despite the support.
- During our observations of patient care staff demonstrated good adherence to hand hygiene practices, including washing their hands and using hand cleansing gel at appropriate intervals. Generally, we saw appropriate use of personal protective equipment (PPE), such as gloves and aprons. On one ward out of the ten visited staff did not routinely wear aprons when cleaning beds or during patient contact with bedpans. Hand cleansing gel was available throughout the hospital and clinical areas. Signs encouraged visitors to cleanse their hands on entry into the ward and we saw staff prompting visitors to do so.
- We saw limited use of 'I am clean' bright green stickers to indicate when an item of equipment or furniture had been cleaned and decontaminated and was ready for use. This was consistent with the findings of the inspections in 2017. On ward 36 and 40 the commodes were visibly clean, with seats lifted and 'I am clean' stickers on, highlighting them as fit for use.
- Completion of infection prevention (IP) screening assessments was inconsistent, which was not in line with the trust policy. Our review of 19 nursing records identified four in which the IP screening was not completed.
- Patients requiring source isolation were nursed in side rooms to prevent the infection spreading to others. On most of the wards visited we saw doors closed as required, however we did not see a consistent use of risk assessments to support the closing of doors.
- Staff told us designated individuals routinely flushed the water systems four times a week and recorded this electronically. This was reviewed and monitored by the estates team and acted on if there were any problems.

## Environment and equipment

- All wards and departments were designed in accordance with Department of Health Guidance Health Building Note (HBN) 04-01: Adult in-patient facilities and included for example, appropriate patient and staff facilities to keep people protected from avoidable harm.
- We reviewed a sample of 12 items of equipment on a variety of wards and found they had undergone servicing in line with planned maintenance schedules.

# Medical care (including older people's care)

- Each ward or clinical area had a resuscitation trolley with a defibrillator and other emergency medical equipment. We checked each trolley and stock of equipment in every medical ward we visited; including daily signed checks to indicate staff had inspected equipment, medicines and disposables. We found staff had consistently documented these checks every day for the previous three months with minimal missing dates.
- Staff in all areas complied with DH Health Technical Memorandum (HTM) 07/01 in relation to the Safe Management and Disposal of Healthcare Waste (2013). This meant staff segregated waste by type using appropriate colour-coded bags and stored them in secure areas.
- In all wards we visited, we found staff stored chemicals in adherence to the Control of Substances Hazardous to Health Regulations (COSHH) (2002), including in safe and secure areas.
- Staff provided pressure relieving mattresses for patients assessed as at risk of developing pressure ulcers. Staff told us bariatric equipment and pressure relieving equipment was readily available when required.
- At 9am, we observed a fire exit door and entrance to ward 43 was restricted due to cleaning trolleys and four metal cages, a patient trolley, three pressure relieving mattresses, a wheel chair and a stack of blue stores boxes. This posed a risk to staff, patients and members of the public when entering and exiting the ward. Fire alarms and emergency exits could not be accessed. It also posed a risk to the delay in evacuation of the ward in the event of a fire or similar incident. We raised this as a concern to the ward staff. When we returned later that day the area had been cleared. This had been raised at a previous inspection. We raised this with the senior leaders in the trust at our feedback meeting, who said they would re-iterate the importance of ensuring clear entrances / exits.
- Patient led assessments of the care environment (PLACE) self-assessments are undertaken by teams of NHS and private/independent health care providers, and include at least 50 per cent members of the public (known as patient assessors). They focus on the environment in which care is provided, as well as

supporting non-clinical services such as cleanliness, food, hydration, the extent to which the provision of care with privacy and dignity is supported and whether the premises are equipped to meet the needs of people living with dementia against a specified range of criteria.

- The assessment of cleanliness for this hospital demonstrated a compliance level of 97% in the PLACE 2017 assessment survey. This was an improvement on the PLACE 2016 assessment survey (93%) and similar to the England average of 98%.

## Medicines

- On the previous inspection in July 2017 and November 2017, inspectors found that staff were not always following prescription instructions for the administration of insulin. We served a warning notice under Section 29A of the Health and Social Care Act 2008 in December 2017. The warning notice was served as we found evidence to suggest the quality of health care in relation to management of insulin for diabetic patients' required significant improvement. At this inspection we found that prescribing and administering of insulin had improved, although it was not performed in line with guidance on every occasion. Further improvements were required to monitor and embed actions that had been taken to achieve improvements.
- We reviewed 20 insulin prescribing (green) charts across ten wards. Insulin had not been administered in accordance with the prescriber's instructions to four out of twenty patients. On 17 occasions patient's capillary blood sugars monitoring were in excess of 18 mmols, requiring further action. In 11 out of the 17 occasions staff administered insulin in line with guidance. On one occasion on ward 32, on 28th May one patient's blood glucose was 24mmols and staff did not administer insulin. On ward 34, a patient did not have insulin on three occasions despite a blood sugar of 23mmols on the 27th May, 21.0 and 19.1mmols on 27th May. On wards 43 and 42 on the 22nd May and 26th May, two patients had blood sugars of 15.8 and 18.8mmols and did not receive insulin in line with their prescription. We escalated this to the staff caring for the patients and we were unable to find evidence around the reason for the deviation in the care in line with guidance. Although this

# Medical care (including older people's care)

demonstrated improvements from the previous inspections, further work was still required. On every chart examined we saw staff followed guidance in the treatment of hypoglycaemic (low blood sugar) episodes.

- Between 1st February and 30th March 2018, only one incident had been recorded of staff not administering insulin as prescribed. The trust recognised the need to look for inappropriate insulin missed doses and had commenced collection as part of the revised medication safety thermometer from May 2018. Trust wide data from the trust for May 2018 indicated an 8.4% prevalence of prescribed insulin doses not administered.
- Diabetes specialist staff monitored compliance with missed insulin doses and appropriate use of the UHL Clinical Decision Support Tool for Hyperglycaemia.
- Staff reviewed patient's medicine regularly including the when required, however, staff altering insulin doses did not always initial the changes in line with best practice.
- Throughout the wards we saw when required insulin was recorded on either green charts or the electronic prescribing system.
- Following a previous incident involving insulin, the trust had issued a Serious Incident Bulletin. The bulletin stated that patients should not be self-administering insulin until they had been risk assessed by trained staff. Staff were aware of the bulletin, and we saw it displayed on wards. We only saw one patient self-administering insulin through an insulin pump. Staff did not have a risk assessment for this patient. We raised this with staff who discussed the risk assessment with medical staff.
- We reviewed medicine storage and safety processes on the wards visited and found these to be in line with trust policy and national standards. This included the locked storage of controlled drugs (CDs) with restricted access and daily documented checks of stock signed by two nurses.
- Medicine requiring cold storage was kept in a locked fridge in all areas we visited. The monitoring of fridge and room temperatures remained inconsistent and was not everyone's responsibility. On ward 34 the

temperature had not been checked for 16 days in a three-month period as no University Hospitals of Leicester Hospitals (UHL) healthcare assistant was present on the ward. On ward 43 the temperature was not recorded for 12 days in March, 12 days in April and 19 days out of 29 in May. This meant that 48% of the time the staff were not assured the medicine was stored at the correct temperature.

- Clinical pharmacists provided a ward based service Monday to Friday and the dispensary was open on Saturday and Sunday mornings. A Clinical pharmacist service is also provided to Medical admission areas from 8am to 7pm on Saturday and Sunday, nor that there is an on call pharmacist available 24 hours a day to provide clinical support and medicine supply (on site until 11pm 7 days a week).
- Pharmacy staff checked (reconciled) patients' medicines on admission to wards and this was prioritised for high-risk patients. For example, patients taking multiple medicines (polypharmacy) or on high risk medicines. This ensured that patients were taking the right medicines in hospital. Patients own medicines were used where required and stored in lockable bedside cabinets. Staff reported good pharmacy support, and we saw pharmacy technicians delivering urgent medicines to the ward. Staff described a recent concern due to a trust wide shortage of a specific strength of medicine and actions taken by pharmacy to monitor stock.
- Pharmacy technicians on Hampton suite had received additional training on administering medicines in line with relevant legislation, current guidance and best practice.
- The hospital used an electronic prescribing and medication administration (EPMA) record system for patients, which aimed to facilitate the safe administration of medicines.

## Records

- Clinical areas used paper notes for patient records, and electronic records of patient observations. Predominantly, these records were written and managed in a way that kept people safe. With the exception of ward 33, records were stored in locked notes trolleys and computer screens were locked when not in use.



# Medical care (including older people's care)

- We reviewed 10 sets of medical and nursing records, and 14 electronic observation charts. Most records were legible with completed nursing assessments and care plans in line with guidance. We found four out of 10 patients did not have an infection prevention and control screening completed within the comprehensive risk assessment booklet. Staff completed fluid balance charts to monitor patient fluid intake and output, however, three out of six fluid balance charts were inaccurately completed and none of the charts (all six) were totalled at the end of 24 hours. This meant that staff could not determine whether a patient was having too much fluid in, or managing to pass all the fluid.
- Where appropriate records contained details of patient's mental health needs, learning disabilities or dementia needs alongside their physical health needs.
- The trust used an electronic admission and handover system. The real-time record included details of all patients admitted and medical history, current treatment and plan of care. The electronic nurse handover profile included the identification of all patients with diabetes who were insulin treated (i.e. a diabetic field) to encourage inclusion of diabetes status in clinical handover. We saw staff using the record to monitor suitability of patients for admission to the reablement ward.
- Safeguarding children and vulnerable adults was classed as mandatory training. Data showed 95% of staff had received training in safeguarding adults with 95% undergoing training in safeguarding children (level one). The trust target for all mandatory training was 95%.
- Staff identified adults at risk of or suffering significant harm. We saw staff providing one to one care to vulnerable patients at risk of harm.

## Mandatory training

- Safety and safeguarding systems, processes and practices were developed, implemented and communicated to staff through mandatory training. Mandatory training subjects included for example, fire safety, moving and handling, basic life support, safeguarding vulnerable adults and safeguarding children. Awareness of the potential needs of patients with mental health conditions, learning disability, autism and dementia was also included. Mandatory training was delivered face-to-face and through an online learning management system.
- The trust set a target of 95% for completion of mandatory training. In medicine, in all staff groups, the trust met the trust target in four out of 11 training modules. These were, safeguarding adults, safeguarding children level one, PREVENT - Workshop to Raise Awareness of Prevent and equality and diversity. Other module compliance was between 68% (fire safety) and 94% (conflict resolution).
- Staff told us they were given time to complete their mandatory training.
- Clinical staff with responsibility for prescribing, preparing and administering insulin completed scenario based face to face and e-learning training. Staff told us this had improved their understanding of caring for patients with diabetes. Between 9th February and 31st May 2018, 489 nursing staff and 257 medical staff in the Cancer, Haematology, Urology, Gastroenterology and Surgery (CHUGGS) and Acute Medicine / ED Specialist Medicine clinical management groups received face to face training. A further 3014 staff trust wide had completed the e-learning module. Face to face training was the method of choice to update all clinical staff working in adult areas. All new medical staff to the Trust

## Safeguarding

- The trust had a safeguarding lead at executive level in addition to local named leads for children and adult safeguarding.
- There were up-to-date safeguarding policies and procedures in place, which were accessible to staff through the trust's intranet site. All staff we spoke with could access the safeguarding policies and understood their responsibilities to protect people from abuse, neglect, harassment and breaches of their dignity and respect. Staff demonstrated an understanding in the actions to take in the case of female genital mutilation (FGM)
- All safeguarding concerns were raised through a centralised reporting system to the safeguarding team which operated on a 24/7 basis. Concerns were then reviewed at a senior level to ensure a referral had been made to the local authority's safeguarding team.

# Medical care (including older people's care)

completed the face to face training first as opposed to the e-learning which could then be done on an annual basis. Due to access and suitability problems with the external module the trust were producing an in-house e-learning package.

## Assessing and responding to patient risk

- During our inspection we reviewed a sample of 19 patient records across 10 wards. We found standards of risk assessments to be consistently good, with fully completed and updated falls risk assessments, waterlow, malnutrition universal screening tool (MUST) and where appropriate bed rail assessment.
- Nursing staff used an early warning scoring system (EWS), based on the National Early Warning Score, to record routine physiological observations such as blood pressure, temperature, and heart rate. EWS was used to monitor patients and to prompt support from medical staff when required. The trust modified some observations according to patient's conditions where observations often deviate from the normal parameters. For example, patients suffering with respiratory disease had a 'type 2 model' for observations that made allowances for lower than expected oxygen saturation levels.
- During our inspection we reviewed 14 sets of patient observations across ten wards. We found nursing staff adhered to trust guidelines for the completion and escalation of EWS. An electronic track and trigger system (E-obs) enabled nursing staff to ensure that EWS scores were correctly calculated, frequency of observations correctly set and the correct escalation response requested. Patients with an increasing EWS score, which represented deterioration of their condition, were identified automatically on the electronic track and trigger system. This system alerted the critical care outreach team (CCOT) as an escalation of care who then attended to the patient as a priority. Through the 'mobile clinical workflow platform' clinicians, including the nurse in charge, had 'real time' knowledge of the deteriorating patient.
- At the time of our inspection, a change request was submitted to the electronic software system for daily automated reporting of the number instances of severe Hypoglycaemia (<3.0mmol/l) and number of instances of severe hyperglycaemia (> 25.0 mmol/L).
- The trust monitored the correct completion of the clinical observations through regular audits. This established standards of care in each ward or clinical area against trust standards.
- Patients with an EWS of three or more, or with a suspected infection due to concern regarding acute change in mental state were screened for sepsis. Sepsis is a severe infection of the blood stream. Sepsis screening was recorded on an Adult Sepsis Screening and Immediate Action Tool. The tool supported staff to identify the most unwell patients and supported fast appropriate actions.
- Patients being treated for sepsis were to be treated in line with the 'Sepsis Six Bundle', key immediate interventions that increase survival from sepsis. There is strong evidence that the prompt delivery of 'basic' aspects of care detailed in the Sepsis Six Bundle prevents much more extensive treatment and has been shown to be associated with significant mortality reductions when applied within the first hour. Administration of an intravenous antibiotic within the first hour is one of the key steps in the sepsis six bundle.
- Between March and April 2018 there were 78 patients who met the criteria for when a sepsis screen was required, of these 11 did not have a sepsis screening form completed.
- In the period March to April 2018, 64 out of 78 (85%) patients who were identified as having red flag sepsis received their antibiotic within one hour of the identification. EWS and sepsis data was reviewed fortnightly at the EWS & Sepsis Review Group (chaired by the Medical Director / Chief Nurse). Data was reported to the Executive Quality Board and the Quality and Outcomes Committee.
- The trust was piloting a diabetes admission assessment for all patients admitted through the emergency department. The electronic clinical workflow platform prompted staff to perform the diabetes assessment and input a capillary blood glucose (CBG). The risk assessment initiated an alert to clinicians for CBG readings below 4mmols or above 18mmols to take further action. Patients with high or



# Medical care (including older people's care)

low blood sugars are at risk of life threatening deterioration in their condition. Work was in progress to increase the use of the diabetes alerts within the electronic platforms to add the alerts within the E-obs.

- As part of the insulin safety action plan the trust provided think glucose and clock magnets for all adult wards to place on the Patient Status at a Glance Boards (PSAG). The aim of these was to support all members of the multidisciplinary team to identify insulin treated patients (including patients with type 1 diabetes and patients with type 2 diabetes who are insulin treated) requiring time critical medicine. During our inspection we saw that the clock magnets were not always used for patients requiring insulin. Staff told us this was due to the space on the board or because they had moved many of the patients that day. One ward did not have a PSAG.
- Specialist diabetic nursing and medical staff provided outreach and safety walkabouts on wards to support staff caring for patients with diabetes and to provide early intervention. Visits were planned on the wards with the highest number of diabetic patients or the patients at highest risk of deterioration. Staff also identified patients who required greater input from the team. During our inspection we saw staff visiting wards to see patients and to prompt staff to complete the diabetes records.
- Staff had access to mental health liaison and/or other specialist mental health support if they were concerned about risks associated with a patient's mental health.
- LRI ensured urgent or un-planned medical admissions were seen and assessed by a relevant consultant within 12 hours of admission or within 14 hours of the time of arrival at the hospital, in line with national standards. The trust audited compliance to this standard twice a year as part of the National Seven Day Services Self- Assessment Tool. Between 11th and 17th October 2017, emergency medicine demonstrated 91.5% compliance (129 notes audited included Geriatric, Stroke, Diabetes and Endo). Gastro Haematology and Oncology were all 100% compliant, however in the random selection of notes only three Gastro, one Haematology and four Oncology notes were audited.

## Nursing staffing

- Nursing and Midwifery Quality and safe staffing reports were discussed at the Quality and Outcomes committee and reported to board. March 2018 report highlighted wards that caused concern or where vacancies were high.
- Twenty out of 28 wards had support staff vacancies, and 25 out of 28 wards reported nursing vacancies. Medical services reported a 9.5% nursing staff and 0.5% support staff vacancy rate. In April 2018, the trust reported 460.5 whole time equivalent qualified nursing and health visiting staff in post within medicine. Staffing levels and skill mix were reviewed daily by the nurse in charge and the matron and discussed with ward staff during their morning 'safety huddle'. Patient acuity and dependency was assessed daily using the 'Safer Nursing Care Tool' (SNCT), an evidence based tool that incorporates a staffing multiplier to ensure that nursing establishments reflect patient needs in acuity / dependency terms. Acuity means the level of seriousness of the condition of a patient. Patient acuity and dependency scores were collected electronically through Nervecentre giving senior managers a 'real time' view of staffing across the wards.
- The trusts sickness absence target was 3%.The sickness absence rate in medical care for March – April 2018 was 4% for nursing staff.
- Staffing levels were displayed in clinical areas; information displayed indicated actual staffing levels did not always meet planned staffing levels. Where there were 'gaps' in staffing bank and agency staff had been requested or were working in the area.
- During our inspection, staff told us and we saw, staffing did not meet planned staffing levels on many of the ten wards we visited. Ward managers were looking after a group of patients and unable to perform a supervisory role. We saw staff moving to other wards to support gaps in staffing.
- We saw staff supporting each other to provide both patient care and to encourage colleagues to have meal breaks.

## Medical staffing

## Medical care (including older people's care)

- Medical staffing numbers had not changed significantly since our inspection in November 2017. In April 2018 the trust reported a 7.1% vacancy rate in medicine. At the time of our inspection the trust reported 250.50 medical staff in post.
- In April 2018, Leicester Royal Infirmary reported an overall sickness rate of 2% for medical staff in Medicine.
- Two Consultants trained in acute internal medicine were available seven days a week on the Medical Assessment Units (Wards R15 and R16).
- Three doctors trained at level ST3 or above were available on the unit at all times. All three had up-to-date competences in advanced life support.
- Arrangements for handovers and shift changes ensured that patients were protected from avoidable harm. On the General Medicine Assessment Unit, the medical handover of emergency medical admissions occurred twice daily.
- A consultant trained in General or Acute internal medicine was on call at all times and able to reach the hospital within 30 minutes.

# Outstanding practice and areas for improvement

## Areas for improvement

### Action the hospital **MUST** take to improve

- The trust must ensure that all staff follow the prescription and trust guidance when monitoring patients blood glucose levels and administering as required insulin.
- The trust must ensure medicine fridge temperatures are recorded daily to ensure medicine are stored at the correct temperature.

- The trust must ensure staff are up to date with mandatory training.
- The trust must ensure staff complete accurate fluid balance charts to support safe care and treatment of patients.

### Action the hospital **SHOULD** take to improve

- The trust should ensure staff follow a consistent process when prescribing as required (PRN) insulin to patients.

This section is primarily information for the provider

## Requirement notices

### Action we have told the provider to take

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

Regulated activity	Regulation
Treatment of disease, disorder or injury	Regulation 12 HSCA (RA) Regulations 2014 Safe care and treatment