

Cramlington MRI Unit





Quality Report

Northumbria Specialist Emergency Care Hospital
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This report describes our judgement of the quality of care at this location. It is based on a combination of what we found when we inspected and a review of all information available to CQC including information given to us from patients, the public and other organisations

Ratings

Overall rating for this location		Good	
Are services safe?		Good	
Are services effective?			
Are services caring?		Good	
Are services responsive?		Good	
Are services well-led?		Good	

Summary of findings

Letter from the Chief Inspector of Hospitals

InHealth was established over 25 years ago and has worked collaboratively with NHS and private sector partners providing magnetic resonance imaging (MRI) services.

Magnetic resonance imaging is a medical imaging technique used in radiology to form pictures of the anatomy and the physiological processes of the body in both health and disease. Magnetic resonance imaging scanners use strong magnetic fields, magnetic field gradients, and radio waves to generate images of the organs in the body.

Cramlington magnetic resonance imaging centre is part of InHealth and is based within the Northumbria Specialist Emergency Care Hospital, Northumbria Way, Cramlington, which is part of Northumbria Healthcare NHS Foundation Trust. The service is operated and managed independently from the trust.

The hospital opened in June 2015 and specialises in emergency care for sick and injured patients referred from the emergency care hospital. The static magnetic resonance imaging unit became operational on 15 June 2015.

The unit was purpose built as part of the Northumbria Healthcare Trust contract being one of three magnetic imaging centres static units in the trust. The fourth is a mobile service at Hexham.

Magnetic resonance imaging services were provided for Northumbria Healthcare NHS Foundation Trust patients only. The service at Cramlington differed from the base sites at North Tyneside and Wansbeck in that patients were not scheduled on an appointment-based system but were vetted usually by the radiographer on duty and prioritised on an urgency and a case by case basis after review on the trust radiological information system. The flexibility enabled the unit to meet the needs of patients at any given time throughout the working day. The patients came from the hospital wards or from accident and emergency.

The North Tyneside and Wansbeck MRI base sites referred to were not part of this inspection but had been inspected previously.

The scanner in the unit was a wide bore scanner and was selected for its image quality and state of the art technology. The scanner was covered by seven-day service engineering support from the manufacturer to minimise downtime as much as possible.

We inspected the magnetic resonance imaging part of this service using our comprehensive inspection methodology. We carried out an unannounced inspection on 11 April 2019.

To get to the heart of patients' experiences of care and treatment, we ask the same five questions of all services: are they safe, effective, caring, responsive to people's needs, and well-led? Where we have a legal duty to do so we rate services' performance against each key question as outstanding, good, requires improvement or inadequate.

Throughout the inspection, we took account of what people told us and how the provider understood and complied with the Mental Capacity Act 2005.

During the inspection we spoke with four staff, one patient and one relative. We reviewed 10 sets of patients notes, five consent forms, reviewed four staff files and one staff development evidence portfolio.

Services we rate

We rated the service as **Good** overall because:

- All staff mandatory and safeguarding training was up to date.
- All relevant magnetic resonance imaging equipment was labelled 'MR safe' in line with Medicines and Healthcare Products Regulatory Agency (MHRA) recommendations.

Summary of findings

- The scanning room had appropriate warning signs displayed.
- In the event of unexpected urgent clinical findings there was a clear process to follow.
- There was a structured post graduate development programme.
- All magnetic resonance imaging staff had a current staff appraisal.
- There was positive patient feedback about the service.
- Staff demonstrated an understanding of the patients and patient dignity was maintained.
- Referrals were prioritised by clinical urgency.
- The management team were described as approachable, open and honest.
- The service had a clinical governance framework with links and representation on the local NHS trust meetings.
- Risks were assessed, recorded and where applicable recorded on the risk register and escalated to senior managers.

Ann Ford

Deputy Chief Inspector of Hospitals (North).

Summary of findings

Our judgements about each of the main services

Service

Diagnostic imaging

Rating Summary of each main service

We rated the service as **Good** overall because;

- The scanning room had appropriate warning signs displayed.
- In the event of unexpected urgent clinical findings there was a clear process to follow.
- There was a structured post graduate development programme.
- All the magnetic resonance imaging staff had a current staff appraisal.
- Staff demonstrated an understanding of the patients and the dignity of patients was maintained.
- Referrals were prioritised by clinical urgency.
- The management team were described as approachable, open and honest.
- The service had a clinical governance framework with links and representation on the local NHS trust meetings.
- Risks were assessed, recorded and where applicable recorded on the risk register and escalated to senior managers.
- There was a formal on-call system in place to deal with urgent scans.

Good



Summary of findings

Contents

Summary of this inspection

	Page
Background to Cramlington MRI Unit	7
Our inspection team	7
Information about Cramlington MRI Unit	7
The five questions we ask about services and what we found	9

Detailed findings from this inspection

Overview of ratings	11
Outstanding practice	34
Areas for improvement	34

Good



Cramlington MRI Unit

Services we looked at

Diagnostic imaging.

Summary of this inspection

Background to Cramlington MRI Unit

Cramlington magnetic resonance imaging centre, which is part of InHealth, was based within a host NHS trust based at Northumbria Specialist Emergency Care Hospital. The service was totally independent from the trust.

The service was registered to provide the following regulated activities:

- Diagnostic and screening procedures.

The service had not previously been inspected.

The registered manager has been in post since June 2014. The unit opened in 2015.

Our inspection team

The team that inspected the service comprised a CQC lead inspector, assistant inspector and a specialist advisor with expertise in radiography. The inspection team was overseen by Sarah Dronsfield, Head of Hospital Inspection.

Information about Cramlington MRI Unit

The Cramlington magnetic resonance imaging service was provided by a private company called InHealth. The unit was one of four magnetic resonance imaging centres within the local NHS trust where InHealth provided magnetic resonance imaging services.

The Cramlington magnetic resonance imaging centre was located within Northumbria Specialist Emergency Care Hospital.

The magnetic resonance centre was located within the Trust's X-ray department. There were clear signs for patients to follow from the main hospital entrance to the X-ray department. There were signs within the department for the magnetic resonance imaging centre. The unit consisted of a lobby/patient preparation room with privacy curtain and blinds, scan room where the magnetic resonance imaging equipment was located and a control room where the radiologist sat during a scan. There were shared unisex accessible patient toilets in the corridor opposite the magnetic resonance imaging centre which were the responsibility of the trust.

At the eastern end of the corridor were fire doors which allowed access to a mobile connection port, which in the event of unplanned downtime would be used to enable a mobile unit to be brought in to maintain the delivery of the service.

As the service was not appointment-based and all the patients were referred from the specialist emergency care hospital wards or accident and emergency department, there was no reception area in the unit.

All the areas in the unit were regarded as restricted, with a swipe-card controlled entrance door restricting access from the main radiology corridor.

Staff on full time contracts included an operational manager, a superintendent magnetic resonance imaging radiographer and a trainee (post graduate) magnetic resonance imaging radiographer. There were 3.83 full time equivalent senior magnetic resonance imaging radiographers, three were on full time contracts and one was on a part time contract. There was a 0.63 full time equivalent senior radiographic assistant on a part time contract. There were 1.34 full time equivalent health care assistants, one was part time the other was on a zero hours contract.

Summary of this inspection

Magnetic resonance imaging staff worked cross-site as part of a pool of staff within the Northumbria magnetic resonance imaging team covering North Tyneside, Wansbeck and Cramlington sites.

The service was open seven days a week, 365 days a year.

InHealth were working towards accreditation with the Imaging Services Accreditation Scheme (ISAS).

The service was accredited by the following national bodies:

- ISO 9001:2015 which specifies requirements for a quality management system. An organisation needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements.
- ISO/IEC 27001:2013 specifies the requirements for establishing, implementing, maintaining and continually improving an information security management system within the context of the organisation.
- Improving Quality in Physiological Services is a professionally-led accreditation scheme with the aim of improving services, care and safety for patients undergoing physiological tests, examinations and procedures.
- United Kingdom Accreditation Service accreditation for Improving Quality in Physiological Services offered the benefits of sharing best practice and the opportunity to enhance efficiency with evidence for local leverage.

Accreditation also brings national recognition to the service with a badge of quality and Investors in People which was a standard for people management, offering accreditation to organisations that adhered to the Investors in People standard.

The service was registered to provide the following regulated activities:

- Diagnostic and screening procedures.

Activity (January 2018 to January 2019):

- In the reporting period January 2018 to January 2019 the service carried out 3,350 magnetic resonance imaging scans, of which 3,349 were NHS patients and one was a private patient.
- There were 108 patients scanned who were aged under 19 years during the reporting period, of which 31 were aged under 10 years and 77 were aged between 11 and 18 years.

Track record on safety:

- No never events.
- Four clinical incidents with no harm, one with low harm, none with moderate harm, none with severe harm and no deaths.
- There were no reports of serious injuries.

No complaints were recorded.

Summary of this inspection

The five questions we ask about services and what we found

We always ask the following five questions of services.

Are services safe?

We rated safe as **Good** because:

- All staff mandatory and safeguarding training was up to date.
- All areas of the MRI unit appeared visibly clean and well looked after.
- There were regular cleaning and hand hygiene audits conducted.
- All relevant magnetic resonance imaging equipment was labelled in line with Medicines and Healthcare Products Regulatory Agency (MHRA) recommendations.
- The scanning room had appropriate warning signs displayed.

Good



Are services effective?

The effective domain was not rated. However, we did find the following areas of good practice:

- In the event of unexpected urgent clinical findings there was a clear process to follow.
- There was a structured post graduate development programme.
- All the magnetic resonance imaging staff had a current staff appraisal.
- The magnetic resonance imaging service was available every day. The service operated a Monday to Friday out of hours on-call service to deal with urgent scans.
- Staff were aware of the requirements relating to mental capacity and consent.

Are services caring?

We rated caring as **Good** because:

- There was positive patient feedback.
- The dignity of patients was maintained while they were undergoing a magnetic resonance imaging scan.
- Radiographers were observed communicating with patients over the scanner intercom providing reassurance.

Good



Are services responsive?

We rated responsive as **Good** because:

- The availability of the service was designed around managing the demand and patient profile of those using the service.

Good



Summary of this inspection

- The service provided a wide range of magnetic resonance imaging examinations
- The environment was appropriate and patient centred.
- Referrals were prioritised by clinical urgency.

Are services well-led?

We rated well-led as **Good** because:

- The management team were described as approachable, open and honest.
- Good team work and support was observed during the inspection.
- The service had a clinical governance framework with links and representation on the local NHS trust meetings.
- Risks were assessed and recorded and where applicable recorded on the risk register and escalated to senior managers.
- The service held regular health and safety meetings.
- The operational manager held quarterly contract review meetings with the NHS trust and the commissioning teams.

Good







Detailed findings from this inspection

Overview of ratings

Our ratings for this location are:

	Safe	Effective	Caring	Responsive	Well-led	Overall
Diagnostic imaging	Good	N/A	Good	Good	Good	Good
Overall	Good	N/A	Good	Good	Good	Good

Diagnostic imaging

Safe	Good 
Effective	
Caring	Good 
Responsive	Good 
Well-led	Good 

Information about the service

Cramlington magnetic resonance imaging centre is part of InHealth and is based within the Northumbria Specialist Emergency Care Hospital, Northumbria Way, Cramlington, which is part of Northumbria Healthcare NHS Foundation Trust. The service is operated and managed independently from the trust.

Are diagnostic imaging services safe?

Good 

We rated safe as good.

Mandatory training

- The service provided mandatory training in key skills to all staff and made sure everyone completed it.
- During the inspection there was evidence in all the staff files there was 100% mandatory training compliance. There was evidence in staff files they had read the local rules and employers procedures.
- Staff mandatory training was provided initially through InHealth headquarters during staff induction and then as a mixture of on-line and face to face practical sessions'
- The overall training records were held by the company human resources department and were recorded on a computer database.
- Individual staff held their own personal files which included their mandatory training course attendance.

- When a mandatory training course was required or due a refresher the member of staff and their supervisor would be sent an email reminder.
- Mandatory training was discussed as part of the staff appraisal system.
- There was evidence the service carried out paused checks. We saw the relevant forms were stamped, initialled, then scanned to the patient event hospital internal reporting system.
- We saw evidence staff had acted in accordance with InHealth's Patient identification policy version nine which went live in November 2018 , and the local work instruction document 'Staff roles and responsibilities'. Completion of documents were observed during the inspection.

Safeguarding

- Staff had training on how to recognise and report abuse and they knew how to apply it.
- Safeguarding formed part of induction and mandatory training focussing on preventing people suffering from all forms of abuse and avoidable harm within the service in accordance with intercollegiate guidelines. The weekly local NHS trust safeguarding meeting and biannual safeguarding board monitored InHealth compliance with safeguarding policies, raising concerns processes and identifying themes and setting improvement goals.
- The service had an identified safeguarding lead and deputy trained to safeguarding level four adults and children. Local managers were trained to safeguarding

Diagnostic imaging

level two children and level two adults. All other staff were trained to adults and children's safeguarding level two. We saw evidence all the staff had up to date children's and adults safeguarding level two training.

- There was a list of names, roles and contact details for internal and external staff to contact in relation to safeguarding and child protection issues for staff to use to seek advice and guidance.
- The date of the safeguarding course and attendance was recorded on a computer database managed by the company human resources department.
- Although the service had not made any safeguarding referrals, staff we spoke with knew how to make a referral. There was poster displayed in the scanning room office which had clear instructions how to make a referral and how to contact the safeguarding leads.
- The service had a safeguarding children, young people and adult's policy in line with intercollegiate guidance.
- The policy outlined the principles of prevention of harm and abuse. The policy covered definitions of risk, the prevent strategy and staff roles and responsibilities.

Cleanliness, infection control and hygiene

- The service controlled infection risk well. Staff kept themselves, equipment and the premises clean. They used control measures to prevent the spread of infection.
- There was evidence of regular infection prevention and control audits being completed including cleaning schedules for the premises and equipment as well as hand hygiene audits.
- The annual hand hygiene schedule for 2018 was reviewed. The audit consisted of monthly observations of staff adherence to hand hygiene procedures. There were a total of 204 observations of staff completed and only one recorded as not compliant.
- We reviewed the November 2018 acute infection control audit. The audit was carried out by the hospital trust at the request of InHealth who felt it would be useful to have an independent review of their infection control procedures.
- The audit showed 87.2% compliance. There was an accompanying action plan for the areas where there had not been 100% compliance with action owners and dates for completion. During inspection we saw evidence the actions in relation to the infection control procedures and appointment of the fire warden had been finalised.
- All areas of the clinic appeared visibly clean and well looked after. There were bottles of alcohol hand gel situated around the clinic for staff and patients to use.
- Staff worked bare below elbows and were observed using hand gel prior to patient contact and washing their hands after contact. There was a hands-free sink for staff. There were gloves and universal wipes and hand wash available for staff to use.
- Staff were observed using personal protective equipment correctly and cleaning the magnetic resonance imaging coils and the MRI bed between patients. Paper towel covers were used on the MRI bed and changed after each patient.
- Staff told us if they had been made aware through the referral process a patient was infectious they would be scanned at the end of the appointment list and the room and equipment would be thoroughly cleaned afterwards.
- The cleaning would be recorded on a decontamination form and retained for infection control records.
- If the scan was urgent that it could not be delayed staff told us once the patient had been scanned the magnetic imaging room and scanner would be subject to a full decontamination clean.
- Patients were given earplugs and ear defenders which were worn during the scan. The ear plugs were disposable. The ear defenders had disposable covers which were changed between patients. There was a ready supply of both ear plugs and ear defender covers available.
- The service used a professional deep cleaning company to perform scheduled deep cleans of the clinical areas. The deep cleaning contract did include the magnetic imaging scanning room.

Diagnostic imaging

- The Operational Manager explained because of safety concerns, trust domestic staff were not allowed in the scanning room and magnetic resonance imaging staff performed daily cleaning of that area and equipment within it.
- The cleaning company provided a decontamination certificate which outlined which areas had been cleaned and any actions taken to resolve any cleanliness issues.
- We saw evidence of daily cleaning records completed at the end of each working day, which showed the scanning room floor and equipment within it were cleaned daily.
- During inspection we saw an installation acceptance certificate dated 2015 and the hospital trusts medical physics acceptance report 2015 in relation to the MRI equipment. We saw evidence of daily checks log which were viewed.
- There was evidence of regular servicing of the MRI equipment by the MRI manufacturer and an external company.
- The scanner was a wide bore scanner which had been selected for its image quality and state of the art technology.
- We saw evidence the service carried out quarterly health and safety audits covering documentation and information (risk registers), general office safety and ergonomics, manual handling tasks, housekeeping, indoor environment, fire safety, first aid and hygiene, emergency procedures, electrical safety, medical or pressurised gases and infection control.
- Any adverse findings resulted in an action plan with an owner and timescales to complete the action. We saw an example of a completed internal health and safety inspection dated October 2018 which identified the service needed to appoint a fire warden. During inspection we saw evidence the actions in relation to the infection control procedures and appointment of the fire warden had been finalised.
- Appropriate safety warning information was displayed on the door from the lobby area to the scanning room and on the scanning room door.

Environment and equipment

- The service had suitable premises and equipment and looked after them well.
- The unit was linked via a corridor to the trust radiology department. The unit consisted of a clinical area with privacy curtain and blinds, a control room and scanner room. The equipment or 'tech' room was located further along the corridor from the main entrance door to the unit.
- Towards the fire doors was a mobile connection port which in the event of unplanned downtime would act as a location for a mobile unit if it was required to maintain service delivery.
- A toilet and patient changing room was located across the corridor to the unit. These facilities were shared with the trust computerised tomography department.
- All areas in the unit were regarded as restricted with a swipe-card controlled entrance door restricting access from the main radiology corridor.
- In the magnetic resonance imaging area there was a scanning room and staff area for reporting which had a window allowing staff to see into the scanning room.
- The control panel in the scanning control room had a system which constantly monitored the levels of oxygen. If levels dropped below a safe level an alarm would sound.
- The clinical area outside the scanning room had a sink, personal protective equipment, slide sheets, a locked cupboard for the storage of contrast and boxes of consumable items.
- There were bins for clinical and non-clinical waste and scales for weighing patients. All were labelled 'MR safe'. Ear defenders were available for patients and staff. "Loud noise" signs were displayed on the scan room door and on the entry door to the unit
- There was an emergency eye wash station, a blood pressure monitor, oxygen, suction, a hand sanitiser gel dispenser located on the wall immediately outside the entry door to the scan room. There were also lockable boxes for patient valuables.

Diagnostic imaging

- There was a medicines box, sharps box and glass bin all correctly labelled.
- Seven different consumable items were checked, and all were found to be in date.
- The scan room had a tensor band which was stretched across the scanner door when open to provide a visual barrier to prevent anyone entering unnecessarily. All equipment in the room was appropriately labelled as MR safe.
- The room had wipes for cleaning the equipment down after use and there was a store for coils which all appeared visibly clean. There was a supply of patients' gowns, immobilisation pads, MRI phantoms for quality assurance, paper towel rolls for use on the MRI bed and single use mop heads in a cupboard for cleaning.
- The scanning control room had a display of the area showing the magnetic field on the wall for staff to refer to.
- There was an emergency stop button in the control room which overlooked the scan room, which if pressed stopped the scan.
- The scanner had an emergency buzzer for the patients to use to contact staff if they were experiencing any difficulties while being scanned.
- We saw evidence of building evacuation plans. Evacuation routes were kept clear. All staff undertook fire safety training. There were an appropriate number of fire wardens available at the site. All fire exits were clearly marked and fire alarms were regularly checked.
- Health and safety equipment was maintained and easily accessible. Staff were aware of the types and location of equipment, for example first aid kits and fire extinguishers.
- Warning signs highlighting hazards were used where necessary.
- There was evidence of monthly equipment safety audits being carried out to check the equipment was in working order and not due a service or replacement. The oxygen cylinders were subject to weekly audits to check if they were full or empty and required refilling.
- During inspection we saw the phantoms were used daily in the quality assurance process before any scans were carried out and were stored in a locked cupboard. Imaging , or simply , is a specially designed object that is scanned or imaged in the field of medical imaging to evaluate, analyse, and tune the performance of various imaging devices including magnetic resonance imaging scanners.
- If any issues with the scanner were identified advice could be obtained from the company who installed it.
- There was a service contract which included repairs for the scanner through the manufacturer. The scanner was serviced every six months. We saw evidence the service records were held electronically, and the last service had been carried out on 30th March 2019.
- We reviewed 23 service records from 2018. The records covered four-hour preventative maintenance, which consisted of the service team carrying out various checks to ensure the MRI equipment was in working order. The records also covered the seven-hour full servicing of the MRI equipment.
- The operational manager told us if a fault was reported the company who had the service and repair contract would attend the same day to affect a repair. Any delays in repairs were caused by sourcing a replacement part from the manufacturer.
- All maintenance records were held centrally at InHealth headquarters, which meant there was a corporate overview of the maintenance of equipment.
- If the patient was not mobile there was a non-metallic wheelchair to get the patient to the scanner. The patient scan bed had height adjusters which could be raised or lowered to allow the patient to get safely onto the scan bed.
- Patients who were being scanned were provided with ear defenders with disposable covers which were observed to be changed between patients. Disposable ear plugs to reduce the noise of the scanner were available if required.
- If a patient needed to be removed from the scan room quickly, for example in the event of an emergency, the patient would be placed on a magnetic resonance imaging safe trolley which was kept in the scan room.

Diagnostic imaging

The patient would be taken across the corridor to the Computerised Tomography (CT) scan room where the emergency trolley was located. The trolley could be used for adults and children. The hospital medical team with would attend to treat the patient when alerted by the MRI staff.

- There were private changing cubicles for patients who needed to change into a gown prior to a scan.
- If the magnetic resonance imaging staff were aware a bariatric patient required to be scanned they would seek the assistance of the host trust staff to obtain a hoist to facilitate moving the patient. Managers told us the service did scan bariatric patients, but the scanner weight limit was 240kgs and if the patient weighed more than this they would be referred elsewhere.

Assessing and responding to patient risk

- Staff completed and updated risk assessments for each patient. The records were clear and recorded on computer-based systems.
- We observed staff completing an MRI safety questionnaire with a patient. This was signed by the patient and radiographer before the form was scanned onto the InHealth patient record system.
- We saw evidence that if a patient was to have contrast administered during a scan their height and weight was recorded so the correct dosage could be worked out.
- We reviewed the InHealth administration of gadolinium based contrast policy version eight and the accompanying forms in relation to the administration of gadolinium which included a patient checklist. We also saw a copy of local work instruction 'Patients requiring contrast during MRI' issue six from March 2019 which provided staff detailed information about the administration of contrast.
- The provider had a policy which required patient drug reactions to be reported. In addition, patients who had suffered a reaction had to be assessed by the lead radiologist in the first instance and then by the hospital staff from the referring ward. A record of what had happened, and the action taken would be added to the patient's notes. The incident would be reported to the Medicines and Healthcare products Regulatory

Agency and on the trust's computer patient record system so staff were aware of the adverse reaction should the patient be admitted to hospital in the future.

- In the event of an emergency, the patient would be brought out of the scanner room using the removable scanner bed , the scanner room door would be closed and secured.
- The hospital team would be called to assess and treat the patient in the MRI clinical lobby area. The emergency resuscitation trolley, used for adults and children)would be brought from nearby CT into the MRI clinical lobby area.The hospital medical team would assess and treat the patient.
- All staff were trained to perform adult and paediatric basic life support (BLS). They would act in accordance with their training until the hospital's resuscitation team arrived. The patient would be removed from the scanning room.
- Between 9am and 5pm consultant radiologists were present in the nearby NHS trust reporting rooms for specialist advice. After 5pm a trust consultant from the NHS trust was on duty 5pm-8pm for advice.
- We reviewed a January 2019 audit of inappropriate magnetic resonance imaging referrals. The data used was from January 2015 to 2 Feb 2019. The aim of the audit was to identify any inappropriate referrals for scans, including common themes and to feedback any identified as learning outcomes for the referrer. The audit showed there had been six inappropriate referrals in the audit period. One was because a patient had metal in their eye which had not been disclosed. The scan was stopped immediately. The other five related to patients with disclosed pacemakers. All patients were aware but the referrer had not documented checking this. All five patients were not scanned and no harm resulted. The patient safety questionnaire and pre-magnetic resonance imaging for each case was reviewed and found to have been correctly completed. The referring clinicians were informed of the reason for rejection and justification for cancelling the scans.

Diagnostic imaging

- We saw evidence staff could obtain advice and support through InHealth's network of retained medical and subject advisors who were accessible through the InHealth clinical quality team.
- The electronic patient referrals were reviewed on the orders list and vetted by the consultant radiologist of session unless they were cauda equina or stroke cases in which case the radiographer would vet and prioritise those cases as urgent and scan in line with agreed set protocols. Radiologists vetted all other referrals including those cases requiring contrast.
- If patients had possible magnetic resonance imaging contraindications, any documented proof of compatibility was scanned into the trust's patient record system as evidence of risk assessment and decision-making safety. We saw evidence documents supporting decision making about potential magnetic resonance imaging contraindications were retained electronically on the InHealth computer system.
- Staff told us pregnant women were rarely scanned and if they were this was usually in an emergency under the direction of a consultant after obtaining the appropriate consent, completion of the safety questionnaire and discussion of the risks involved.
- Before the scan was carried out a risk benefit discussion was carried out by the duty radiologist with the referrer. If the scan was to go ahead any risks were discussed with the patient and their consent obtained.
- If at any time during the scan the radiographers deemed the patient required urgent medical attention the radiologist would be contacted to review the images as soon as possible. The patient would be kept in the unit pending the radiologist review as they may need further sequences, contrast administration or their case may need escalated for more urgent intervention.
- Following the scan all images were sent to the relevant picture archiving and communication system to ensure that they were available to the applicable clinical teams. In some cases, the referring consultant had sat in the magnetic resonance scanning office with staff and viewed the images in real time and directed where to scan.
- During inspection we saw evidence of a cardiac arrest scenario exercise which was carried out at another MRI centre in October 2018. We saw evidence that the learning from this scenario was shared with all InHealth staff by email as a reminder of the correct actions to follow during resuscitation events.
- The service had a resuscitation policy dated July 2018 due for review July 2019. The policy was designed to ensure staff were equipped and trained to offer the appropriate level of resuscitation support where this was required.
- The purpose of the resuscitation policy was to set out the arrangements for managing the risks associated with, and the systems in place to support, effective resuscitation provision for InHealth service users.
- During inspection we reviewed 50 clinical risk assessments. All were in date and the information was current.
- The superintendent radiographer was responsible for magnetic resonance safety and compliance with the magnetic resonance local rules.

Staffing

- The service had enough staff with the right qualifications, skills, training and experience to keep people safe from avoidable harm and to provide the right care and treatment.
- Staff on full time contracts included an operational manager, a superintendent magnetic resonance imaging radiographer and a trainee (post graduate) magnetic resonance imaging radiographer.
- There were 3.83 full time equivalent senior magnetic resonance imaging radiographers, three were on full time contracts and one was on a part time contract. There was a 0.63 full time equivalent senior radiographic assistant on a part time contract. There were 1.34 full time equivalent health care assistants, one was part time the other was on a zero hours contract.
- Magnetic resonance imaging staff worked cross site as part of a pool of staff within the Northumbria magnetic resonance imaging team covering North Tyneside, Wansbeck and Cramlington sites.

Diagnostic imaging

- Staff told us there were normally staff on shift in MRI each day. One experienced Radiographer and one Radiographic or Health Care assistant. On some days a graduate trainee would work with them.
- Staff covered 8am to 8pm Monday to Sunday, with the possibility of extending the working day from 7am to 9pm depending on the number of requests for scans.
- The service used a staffing coordinator who reviewed staff across all the magnetic resonance imaging sites in the trust. The InHealth staffing coordinator identified staff with specific skills, training and qualifications to carry out specialist scans. They would be identified and allocated to the specialist magnetic resonance imaging clinics.
- The service provided on-call cover Monday to Sunday, 8pm to midnight to carry out urgent scans. An on-call staffing rota was planned to ensure staff were not scheduled to be at work the following morning after being on-call. The trust switchboard was e-mailed with the rota in advance so they had secure telephone contact information for each day in the month. Any changes were e-mailed to trust switchboard when they occurred.
- The on-call process was the referrer would ring the switch board to request the scan. The call would be forwarded to an out of hours company, contracted by the host trust, who would vet the referral to ensure it complied with the out of hours scanning criteria. If the criteria were met the InHealth on call staff would be contacted to attend the magnetic resonance imaging scanning unit to scan the patient.
- The MRI staff had access to a children's nurse from the trust who would accompany a paediatric patient if required.
- There were no staff vacancies at the time of the inspection.
- The service did not use bank staff or agency staff because of the specialist nature of the service provided. In the event of staff calling in sick, InHealth staff from the other base sites would cover the Cramlington site as a priority and bank or agency would be brought in for base site cover.
- The operational manager told us that if staff were called out there were staff from the hospital diagnostics department who could be present if required during the scan. In addition, because the urgent scans were from the host hospital wards the patients were always accompanied by at least one porter.

Records

- Staff kept detailed computer based records of patients' care and treatment. Records were clear, up-to-date and easily available to all staff providing care.
- Magnetic resonance imaging referrals were mainly generated as electronic referrals through the trust computer system. Any contingency referrals would be paper-based; a paper request would only be used in the event of IT system failure. The last time this had to be used was following a cyber-attack in May 2017 that affected the NHS trust.
- The electronic referrals were reviewed on the orders list and were vetted by the consultant radiologist. Exceptions to a radiologist vetting would include when suspected cauda equina (a condition that occurs when the bundle of nerves below the end of the spinal cord is damaged) or stroke patients were referred for a scan. In those cases, the radiographer would vet and prioritise those patients so they were scanned as a priority following set protocols which were pre-set on the scanner.
- Once vetted and protocolled, referrals were transferred from the orders list to the request list. Patients on the request list were reviewed and scanned in order of clinical priority, which was based on guidance from the consultant radiologist or the clinical referrer.

Medical staffing

- The service had enough staff with the right qualifications, skills, training and experience to keep people safe from avoidable harm and to provide the right care and treatment.
- The service used radiologists based within the local NHS trust to review scan results and prepare reports if the patient had been referred from within the trust.

Diagnostic imaging

- Implantable devices documentation had to be completed by the referring clinician in advance of the scan and reviewed by the unit staff to determine the suitability and safety of carrying out the scan. Paper based referrals, if used, were vetted in the same way as electronic referrals and once vetted the referral documents were scanned onto the electronic patient record.
- Patient safety questionnaires were completed and reviewed for appropriateness for scanning.
- For patients with possible contraindications, any documented proof of compatibility was scanned into the electronic patient record system as evidence of decision making about safety.
- Once patients were scanned the images were transferred to the trust's patient record system and reported.
- During the hours between 8am to 8pm, generally the trust consultant radiologist reported on all scans. After 8pm the images were reported by an external company in line with the agreed trust pathway and service level agreement.
- Patient reports were available for viewing on the service and trust patient record systems. Printed copies of reports were only sent to the referring clinician if an alert was raised on the report or through the clinical information system. This ensured unexpected findings were escalated and actioned by the referrer.
- When a patient arrived for a scan a radiographer went through the safety questionnaire confirming the answers and the consent before it was signed by the patient, parent and radiographer. This information was scanned onto the trust and InHealth patient recording systems.
- Radiographers were observed updating records of patients scanned during the day of the inspection.
- During inspection we reviewed five patient lack of capacity screening forms, five patient safety checks and five records where contrast had been used. All were completed correctly and contained proxy consent when the patient lacked capacity.

- We saw evidence during inspection if a patient was to receive contrast their renal function was checked and recorded in the patient's notes. A patient's glomerular filtration rate (GFR) result would be accepted if it was within three months of the scan.

Medicines

- Controlled drugs were not stored or administered as part of the services provided.
- The safe and secure management of medicines was overseen by the InHealth multidisciplinary 'Medicines Management Group' which met on a quarterly basis. Organisational pharmacist support and guidance was provided by In Health's retained pharmacy advisor.
- The trust lead clinical pharmacist was available to provide advice locally if needed.
- The service carried out medicine audits which checked the patient contrast administration record, and magnetic resonance imaging drug tracker records. The audit also covered a medicines stock check. We reviewed the audits for March, June, August and November 2018. There had been issues identified in the June and August audits where records had not been signed. Staff were sent an e mail reminder regarding their responsibilities and the November audit showed 100% compliance.
- We saw evidence of a medicine audit carried out in February 2019. The audit covered 10 randomised patients selected between December 2018 to February 2019. Nine medicines administration records were found to be fully completed and tracked in the medicines tracker log.
- There was one patient whose medicines administration form was incomplete in that no details of the medicine name or volume administered were documented. The batch number was completed and drug tracker log had been completed. The form had been signed by two staff for checking purposes.
- There was evidence the audit result was followed up by an e-mail to all staff from the operational manager, reminding staff to be vigilant and accurate in medicines management, which was essential for traceability purposes. Staff were offered additional training if they felt they needed it.

Diagnostic imaging

- We reviewed the intravenous contrast storage. All the stock was kept in a locked cupboard in the magnetic resonance imaging room lobby. The stock was found to be in date.
- The operational manager told us if a patient required cannulation this was done on the referring ward or department prior to the patient being brought to the magnetic resonance imaging department.
- During the inspection we observed a paediatric nurse had attended the unit when a paediatric patient had contrast administered to offer support to the patient.
- Patient Group Directions (PGDs) were in place for all Gadolinium based contrast agents. PGDs were also in place for intravenous (IV) injections, saline and administration of oxygen. The PGD items were appropriately stored in a locked cupboard. There was evidence of daily stock checks. Patient Group Directions (PGDs) provide a legal framework that allows some registered health professionals to supply and/or administer specified medicines to a pre-defined group of patients, without them having to see a prescriber such as a doctor or nurse prescriber.
- Any medicine related incidents were reported on a computer recording system and to the Medicines and Healthcare Products Regulatory Agency (MHRA).
- There had been no patient contrast reactions in the reporting period.
- The clinical governance team would analyse the data and identify themes and shared learning to prevent recurrence both at location and organisational level. Staff were aware of the importance of reporting near misses and incidents as a process to raise awareness of lessons learnt within the team as well as to identify any training needs which were required.
- Staff were actively encouraged to report incidents and near misses on the InHealth incident management computer-based system. An incident report would be completed for all incidents and near misses in the unit. We saw evidence there was a process to record the outcome of any collapse of a patient while undergoing a scan which would be followed up by the most senior member of staff on duty.
- The service had an adverse event and incident reporting system. Staff were trained to report all near misses, adverse events and non-conformances promptly. These were reviewed weekly at the clinical governance CLIC (complaints, litigation, incidents and complaints) meeting. Investigation and actions to address the adverse event were recorded. The clinical governance team analysed the data and identified themes and shared learning to prevent recurrence both at location and organisational level.
- The service had reported 19 incidents between January 2018 and December 2018. The incidents were; four clinical incidents with no harm, four equipment incidents, two health and safety incidents related to patient falls, six magnetic resonance imaging safety incidents and one other incident which did not fall into the other categories. All the incidents had been risk assessed, risk rated, investigated, any learning shared and closed.
- Between January 2018 and January 2019, the service had not reported any never events. Never Events are patient safety incidents that are wholly preventable where guidance or safety recommendations that provide strong systemic protective barriers are available at a national level and have been implemented by healthcare providers.
- The legal and regulatory duty of candour places a responsibility on providers of healthcare services to be open and honest with service users and other 'relevant persons' (people acting lawfully on behalf of

Incidents

- The service managed patient safety incidents well. Staff recognised incidents and reported them appropriately. Managers investigated incidents and shared lessons learned with the whole team and the wider service. When things went wrong, staff apologised and gave patients honest information and suitable support.
- We saw evidence staff had been trained in using the adverse event and incident reporting systems. Staff were trained to report all near misses, adverse events and non-conformances promptly. These were reviewed weekly at the clinical governance meetings. Investigation and actions to address the adverse event would be recorded.
- The legal and regulatory duty of candour places a responsibility on providers of healthcare services to be open and honest with service users and other 'relevant persons' (people acting lawfully on behalf of

Diagnostic imaging

service users) when things go wrong with care and treatment, giving them reasonable support, truthful information and a written apology. Staff we spoke with on inspection understood what duty of candour was and what their responsibilities were in relation to the duty of candour principles.

- Incidents involving patient or service user harm were assessed against the 'notifiable safety incident' criteria as defined within regulation 20 of the Health and Social Care Act 2008 (regulated activities) Regulations 2014. Incidents meeting this threshold would be managed under the organisation's 'adverse events (incident) reporting and management policy' and 'Duty of Candour, procedure for the notification of a notifiable safety incident' standard operating procedure.
- Decisions relating to organisational disclosures made both under the statutory duty of candour framework and in the wider spirit of openness and transparency if made would be recorded within the corresponding incident or complaint record and held within the electronic risk management system.
- We saw evidence the operational manager attended the trust risk meetings and shared incidents with the trust's governance team and at trust governance meetings.

Are diagnostic imaging services effective?

We do not currently rate the effective domain.

Evidence-based care

- The service provided care and treatment based on national guidance and evidence of its effectiveness. Managers checked to make sure staff followed guidance.
- We saw evidence in patient notes and through speaking with staff that patients had their needs assessed and their care planned and delivered in line with evidence-based, guidance, standards and best practice. This was done through the referral procedure and safety questionnaire.
- National Institute for Health and Care Excellence guidance was followed for diagnostic imaging pathways as part of specific clinical conditions including stroke and spinal cord compression.
- The service was supported by the clinical lead who held subject matter expertise in magnetic resonance imaging and produced evidence-based, best practice guidance in collaboration with the magnetic resonance safety expert.
- The guidance covered magnetic resonance imaging protocols, all aspects of magnetic resonance imaging safety and the establishment of the safety of implanted devices, management of claustrophobia and scan anxiety along with a suite of patient leaflets to meet the varying needs of patients including easy read, paediatric and large print.

Nutrition and hydration

- The nutrition and hydration needs of patients were taken care of on the referring wards.
- No nutrition or hydration was provided to patients by magnetic resonance imaging staff as this could have been in contradiction of their clinical needs.

Patient outcomes

- Managers monitored the effectiveness of care and treatment and used the findings to improve them. They compared local results with those of other services to learn from them.
- We saw evidence of an audit carried out in 2018 and reported February 2019 covering paediatric patients scanned at Cramlington. The audit identified the number of patients scanned by age. The audit identified the most frequent request was for magnetic resonance imaging for head scans, which was 41.6% of the referrals (38 from 108), and 45 of the 108 referrals included head scans with contrast.
- No inappropriate scans were requested for patients aged between 0 and 18 years.
- Between 8am and 8pm, once the scan had been completed, the images were sent for review by the consultant if any unexpected findings were identified.

Diagnostic imaging

The patient may have required a further scan with contrast administration under the radiologist, otherwise, reporting was usually verified the same day within hours of the scan being completed.

- During the on-call periods between 8pm and midnight, scan reports were vetted through an external company which reported within one to two hours in line with the service level agreement.
- In the event of unexpected urgent clinical findings there was a clear process to follow. The consultant in session would be contacted and informed of the finding. They would then decide upon the next course of action.

Competent staff

- The service made sure staff were competent for their roles. Managers appraised staff's work performance and held supervision meetings with them to provide support and monitor the effectiveness of the service.
- The superintendent radiographer told us they were undertaking a cardiac scan course over the next six months. The training would allow them to supervise cardiac scans.
- All MRI staff had undergone the company induction programme and a cannulation course, this meant a patient who may require cannulation could be cannulated in a timely manner.
- Staff told us advice could be obtained from the magnetic resonance imaging safety advisor by telephone who were based at the company headquarters.
- All staff had an annual appraisal plan where specific, measurable, achievable, reasonable, timely (SMART) objectives were set tailored to the individual and company's objectives. There was a mid-point review for staff to note how they were developing and any further action required on both parts to meet the set objectives.
- We saw evidence that in the last 12 months all staff had received an appraisal, had their professional registration checked and had been revalidated.

- Staff were inducted and undertook an initial competency assessment followed by a mandatory training plan and role specific training to support ongoing competency and development.
- We reviewed the induction document given to new staff. The document was version four and dated April 2019. The document contained essential information and referenced where to find information such as policies and procedures.
- Staff we spoke with told us they felt the induction process was very good and equipped them with the knowledge and experience to progress to becoming a radiographer.
- During the induction period staff attended the InHealth company headquarters for training courses. In addition, staff members had a workbook with standards to complete. During the inspection we reviewed a workbook and saw evidence each standard when complete had been signed off by a supervisor. The member of staff's progress was reviewed at four, eight and 12 weeks then annually. The purpose of the workbook was to gather a portfolio of evidence to progress to obtaining a post graduate certificate in magnetic resonance imaging.
- Assurance of staff competence to perform their role within InHealth was assessed as part of the recruitment process, at induction, through probation, and then ongoing as part of staff performance management during the appraisal and personal development processes.
- We saw evidence 16 staff had their competency to use medical devices signed off by the site clinical lead.
- We saw evidence in all staff files we checked radiographers were Health and Care Professions Council (HCPC) registered.
- We saw evidence other key attributes to ensure staff suitability were assessed as part of the interview process, which was based on predetermined questions aligned with the core values.
- There was an InHealth team of society of radiographers accredited practice educators. Their role was to develop the next generation of radiographers. In the event of any aspect of staff

Diagnostic imaging

competency falling short of the required standard, the practitioner's line manager was responsible for providing necessary support and guidance required to attain the relevant standard.

- Ongoing staff competence was managed through the performance review process, with clinical staff also required to complete continuous professional development to meet their professional body requirements, which were produced and discussed during appraisal.
- Staff we spoke with told us InHealth would fund staff to go on external courses and they were afforded ample opportunities for continuous professional development.
- We saw staff development was supported by use of local audit, complaints and incidents review, which highlighted potential failing areas where different staff members may have need support and development.
- The service used site orientation for all staff within their specified local area. For clinical staff this was supported by a comprehensive competency assessment toolkit which covered key areas applicable across all roles, and clinical competency skills relevant to their job role and experience.
- The service allowed staff up to five paid study leave days per year.
- Modality specific training was given by the magnetic resonance safety expert and magnetic resonance imaging clinical lead who held an international magnetic resonance safety officer certificate.
- If poor performance was identified there was a process to monitor and address it through an action plan.

Seven-day services

- The service was open seven days a week, every week of the year. The opening hours were 8am to 8pm Monday to Sunday with the possibility of extending the working day from 7am to 9pm depending on the number of requests for scans. The service had an on-call facility from 8pm to midnight, which provided out of hours scans for urgent cauda equina and stroke patients only.
- Mobile units would be used if the scanner at Cramlington was unusable for over 24 hours. If the

scanner was inoperable for more than 24 hours, the mobile unit was not in place and the scan was urgent, patients would be transferred to other local hospitals who had a scanning service. If scanner capacity was available at another InHealth MRI scanner site, and if the patient was able and willing to travel, they could be offered an alternative appointment.

Multidisciplinary working

- Staff of different kinds worked together as a team to benefit patients. Doctors, nurses and other healthcare professionals supported each other to provide good care.
- Staff we spoke with told us if a patient required a cardiac scan a cardiologist from the trust would attend the scan.
- The duty radiologist attended the weekly joint multidisciplinary meeting with staff from the NHS trust. This allowed staff to discuss procedure outcomes and follow up onward referral of care.
- If a supervised scan was required, for example a cardiac magnetic resonance imaging, the availability of the trust consultant to supervise the session would be confirmed and scheduled as per consultant guidance.

Access to information

- We saw evidence all the information needed to deliver effective care and treatment was available to staff in a timely and accessible way. This included patient care and risk assessments, care and treatment plans and case notes.
- Staff would be provided with patient special notes, for example advanced directives and do not attempt cardiopulmonary resuscitation (DNACPR) orders, as copies of full notes were not provided to the unit.
- InHealth diagnostic imaging staff could access trust systems that managed information about patients to deliver effective care and treatment which enabled scan results to be immediately available post scan to staff from the referring hospital ward.

Diagnostic imaging

- The service had arrangements in place to make sure that diagnostic imaging results were always available immediately after the scan and in some cases the referring consultant would be present during the scan and see the results in real time.
- The service provided electronic access to diagnostic results through the trust's internal recording and reporting systems.

Consent and Mental Capacity Act

- Staff understood how and when to assess whether a patient had the capacity to make decisions about their care. They followed the service policy and procedures when a patient could not give consent.
- Staff understood their roles and responsibilities under the Mental Health Act 1983 and the Mental Capacity Act 2005. They knew how to support patients experiencing mental ill health and those who lacked the capacity to make decisions about their care.
- Staff were aware of the requirements relating to mental capacity and consent specifically for patients that did not have the capacity to consent and the process for seeking advice in relation to this.
- Staff were aware of the need to support patients with cognitive decline, dementia, patients with reduced mental capacity and / or learning disabilities. The service ensured consent was received for all patients on arrival and the environment was safe for them within magnetic resonance imaging safety limitations. No patient would be scanned if they were unable to fill in the safety forms or there was not proxy consent.
- We saw evidence where proxy consent had been used as was recorded on patient record forms for patients who lacked capacity to answer questions on the safety questionnaire or to the scan.
- Staff we spoke with understood this group of patients needed time and explanation before a scan and explanation and instructions should be kept short and simple and repeated as necessary to check understanding. Patients could be accompanied by their carers or family members where possible subject to the person being safe to go into the scanner.

- Staff we spoke with told us they would scan children but the patient would have to attend with a parent or guardian. We saw evidence of this during the inspection.

Are diagnostic imaging services caring?

Good 

We rated caring as good.

Compassionate care

- Staff cared for patients with compassion. Feedback from patients confirmed that staff treated them well and with kindness.
- The service friends and family test results showed a 97% positive feedback in the last 12 months.
- During the inspection we reviewed eight patient feedback forms. Three were from males, four from females and one was unspecified. There were two forms in the age group 25 to 34, two forms were in the age group 45-54, one was in the age group 55 to 64 and three were in the age group 65-74.
- Some of the comments on the forms were; "very friendly, helpful and explained everything", "nice and helpful, good service and I came into A and E crying and in agony and came out of MRI laughing".
- All MRI staff understood patient engagement, effective communication, empathy and patience was essential in helping patients get through the scan procedure.
- During inspection staff were observed interacting with a patient who appeared to be in a lot of pain. Staff were kind and understanding and utilised the faster scanning protocols to minimise the discomfort of the patient.
- Staff were observed using the intercom between the control room and the scan bed to provide reassurance to patients being scanned.
- Staff always discussed with the patient the reason for their procedure and any medical history the patient had given on admission. All information was documented on the patient's pathway.

Diagnostic imaging

- All members of the team were introduced to the patient and told who would be looking after them throughout their time at the clinic.
- There as a chaperone poster stating the clinic could provide another member of staff to be present during the magnetic resonance imaging scan.

Emotional support

- Staff provided emotional support to patients to minimise their distress.
- Staff we spoke with understood fully the needs of patients and why they had attend for a scan including the impact that person's care, treatment or condition would have on their wellbeing and on those close to them, both emotionally and socially.
- During inspection radiographers were observed communicating with patients over the scanner intercom providing reassurance and providing updates as to how long the scan would take.

Understanding and involvement of patients and those close to them

- Staff involved patients and those close to them in decisions about their care and treatment.
- During inspection staff were observed dealing with a paediatric patient. Staff explained everything about the scan in detail but in a way the patient could understand. The parent went through the MRI safety check and could be present while the scan was carried out. They told us they could not fault the staff and thanked them profusely.
- We saw evidence following arrival and checking of the electronic patient information the radiographer introduced themselves, assessed the patient magnetic resonance imaging safety information, provided a full explanation of the procedure and asked the patient if they had any questions before seeking consent in advance of proceeding with the scan.
- Staff we spoke with understood patients may experience claustrophobia or the sense of anxiety which could be quite distressing for some magnetic resonance imaging patients. A section of the

radiographers' clinical competency assessment covered claustrophobia, how to recognise it in a patient and to help a patient manage it during their magnetic resonance imaging scan.

- If a patient was unable to tolerate a scan the radiographers would try to calm the patient if this did not work, they would be referred to the ward to request sedation prior to attempting another scan or to consider other diagnostic techniques.
- All staff understood patient engagement, effective communication, empathy and patience was essential in helping patients get through their magnetic resonance imaging procedure.
- Staff told us many patients undergoing chemo therapy and attending for a scan often had problem veins which made it difficult to cannulate them to administer contrast. In such cases patients would be cannulated in advance of their scans by the referring clinical teams.
- Staff told us that although the imaging protocols were all up to date they often had to adapt their imaging technique because the patients were so poorly and often in pain.
- Feedback from service users was reviewed and acted upon whenever reasonably practicable. Comments on the friends and family test returns were reviewed and shared with the team. Complaints were also shared so awareness could be raised and cascaded across all the InHealth magnetic resonance imaging clinics in the local NHS trust.
- For example, the July 2018 friends and family test return was followed up with an email reminder regarding radiographers emphasising the noise level of the scanner to manage patient expectations and a patient not having an opportunity to ask any questions before the scan. The team were reminded to ask if patients had any further questions before they entered the scan room to ensure all concerns or queries have been discussed and answered in advance of the scan commencing.

Are diagnostic imaging services responsive?

Diagnostic imaging

Good 

We rated responsive as good.

Service delivery to meet the needs of local people

- The service planned and provided services in a way that met the needs of local people.
- The service provided a wide range of examinations in line with the current contractual requirements which included but not limited to musculoskeletal, cardiac, prostate and gastroenterology and gynaecological magnetic resonance imaging scans.
- The operational manager told us prostate and cardiac scans were only carried out occasionally and for urgent cases only.
- All patients referred for magnetic resonance imaging had been reviewed by their referring clinician or referral team prior to attendance.
- The service was available 8am to 8pm Monday to Sunday seven days per week with the possibility of extending the working day from 7am to 9pm dependent upon the number of requests for scans. In addition, an out hour on-call system was in place for urgent scans.
- Very occasionally, and by agreement with the local NHS trust, the main trust site could be used for planned urgent gynaecological or cardiac magnetic resonance imaging scans, ensuring the booking was planned so the emergency care service was not compromised.

Meeting people's individual needs

- The service took account of patients' individual needs.
- The service had faster scanning protocols for patients who were in pain or suffering discomfort which meant the scan would not take as long.
- The wide bore of the scanner in the unit resulted in patients with claustrophobia having a greater likelihood of completing the scan without sedation.
- If a patient required general anaesthetic for a scan the trust at the time of the inspection did not have

magnetic resonance imaging compatible general anaesthetic equipment, therefore, the patient would be transferred to another local trust with a magnetic resonance imaging service for the scan.

- Easy to read leaflets and large print patient information leaflets were available and braille could be provided on request to patients.
- Staff understood patients may have felt distressed because they may have needed to undress and change into a gown which could have made the patient feel vulnerable. A chaperone would be provided if requested by the patient to provide reassurance.
- Staff recognised patient may have experienced claustrophobia or the sense of anxiety which could be quite distressing. A section of the radiographer's clinical competency assessment covered claustrophobia, how to recognise it in a patient and how to help a patient manage it during their scan.
- The service provided imaging for all age groups at the emergency care hospital.
- The unit was accessible to patients with limited mobility. The unit was located on the first level which equated to the ground level from the main entrance to the hospital, so it was accessible for wheelchairs and trolleys. There were patient lifts on each floor of the hospital for access.
- Many patient referrals were either on trolleys or wheelchairs. In the unit there was a magnetic resonance imaging compatible wheelchair and trolley available should the patient be unable to weight bear or walk into the scanner room.
- A hoist was available to use from one of the nearby wards, but generally most patients were brought to the unit on trolley's or wheelchairs. If the hoist was needed for transfer, this would be used under trust staff supervision.
- Language line interpreters could be sourced if the unit was informed prior to the patient arriving in the unit. In a clinical emergency, InHealth policy enabled staff to use 'language line', the trusts interpreting service or a family member to translate at the radiographer's discretion.

Diagnostic imaging

- In relation to children, staff understood it could be a stressful time for parents. Staff ensured parents were well informed about the procedure and they could stay with their child throughout the scan subject to MRI scanner safety screening.
- Magnetic resonance imaging staff told us they could ask for support when necessary from trust staff in the diagnostics department, for example to move a bariatric patient from a trolley into the scanner or if the patient was wearing a neck brace and needed to be moved with minimal disturbance.
- Requests for a scan or diagnostic procedure referrals were followed up by a pre-assessment questionnaire asking the individual to identify if they have any conditions including allergies preventing them from undergoing a scan or procedure. We saw evidence of this on electronic referral forms.

Access and flow

- The emergency care hospital where the magnetic resonance imaging clinic was located differed from the other InHealth sites within the host trust because it was not an appointment-based service but provided the scanning service at any given time based upon demand and clinical need.
- The service provided a wide range of magnetic resonance imaging examinations in line with the contractual requirements of the trust which included but not limited to musculoskeletal, neurological, gastroenterology and some occasional cardiac and prostate scanning.
- All patients referred for a scan had been reviewed by their referring clinician or referral team whether that be from accident and emergency or from one of the wards at the hospital site.
- Activity differed on a day to day basis, ranging from an average of 10 patients per day down to as low as two or three patients on less 'busy' days.
- The collaborative nature of the partnership with Northumbria Healthcare NHS Trust, meant the unit could flex to meet the demands of the service so the expectations of the referring clinicians for all magnetic resonance imaging scans such as urgent gynaecological, cauda equina which are spinal compression injuries or stroke scans were met in line with both contractual and emergency service requirements.
- In the reporting period January 2018 to January 2019 the service carried out 3350 magnetic resonance imaging scans, 3348 were NHS patients and 4549 different areas were scanned, one was another NHS patient from a GP referral and one area was scanned, one was a private patient and three different areas were scanned.
- There were 108 of patients scanned were children aged under 19 years during the reporting period, 31 were aged under ten years and 77 were aged between 11 and 18 years.
- InHealth provided an urgent on-call magnetic resonance imaging service from the hours 8pm to midnight. Only stroke and cauda equina scans were performed during the on-call hours. The current average call outs per week was 2.5 calls but this did vary. In 2018, the most on call's per week was four.
- All scan referrals from the specialist emergency care hospital were vetted by the consultant radiologist of session. Any non-urgent referrals which could be scanned as an out-patient appointment at other InHealth magnetic resonance imaging clinics within the trust were offered appointments which were booked, and the patient scanned at the clinic directed by the vetting radiologist usually within 48 hours.
- This process helped to ensure cases were prioritised and the appropriateness of magnetic resonance imaging scan requests were controlled.
- Consultant Radiologists had to undertake an electronic justification process via the trust clinical record interactive search system to assess the validity of a referral.
- The service was open seven days a week every day of the year. The opening hours were 8am to 8pm Monday to Sunday, as well as through the on-call service from 8pm to midnight which provided out of hours scans for urgent cauda equine and stroke patients only. The overall findings during period September 2017 to

Diagnostic imaging

December 2018 inclusive showed there was an average of 11 calls per month or 2.5 calls per week on average. On average 14 patients were scanned on call per month.

- On average 14% or two patients per month, were confirmed cases of either caudal equina or stroke patients which justified why the on-call service was required.
- Paper referrals would be accepted as contingency in the event of connectivity issues. Historically, these are very low in number and were reviewed in the same way as electronic referrals prior to scheduling any timescale for scan.
- There was evidence scans were prioritised according to clinical need and the availability of the patient, for example, if a supervised cardiac scan was required the availability of the consultant to supervise the session would be confirmed and scheduled.
- Once scans were on the request list the radiographer managed the pending list according to priority, for example, spinal compression or stroke scan requests would be given priority, children and pre-surgery next in line with clinical urgency.
- If patients were unable to be scanned on the same day because the list was busy, and they were regarded as less 'urgent', they could be scheduled for identified slots the following morning, for example, magnetic resonance cholangiopancreatography could be scheduled in for an 8:30am slot as the patient would be required to have fasted for six hours prior to the scan.
- Cholangiopancreatography is a technique to diagnose and treat certain problems of the biliary or pancreatic ductal systems
- In the event the service was unavailable for an extended period there was a ramp to the rear of the unit with a mobile communications port /pad where a mobile magnetic resonance imaging unit could be used if necessary as a contingency to deliver the service. There had been no events of this type since the unit opened in 2015.
- On occasion and by advanced arrangement with the wards, timed scan slots were allocated for some MRI scans first thing the following morning, for example,

cases where patients had been required to have fasted. This allowed the hospital and unit to work together to support bed management, for example, in relation to pre theatre assessment or patient discharge.

- In addition, other InHealth magnetic resonance imaging sites occasionally offered scans at the Cramlington site, usually on low activity weekend days, when waiting times at the other scan sites were increasing. This was done to avoid possible breaches of timeliness key performance indicators. Staff told us the trust were content with this approach subject to it not resulting in urgent scans being affected.
- Between January 2018 and December 2018 there were 21.25 hours 'lost scanning time'.
- This was due to the following; a table side rail clips issue which occurred in May 2018. The unit resumed scanning after two and a half hours. No patient scans were cancelled. There was loss of service for two hours in November 2018 due to the requirement to carry out a computer software update on the scanner. No patient scans were cancelled. In December 2018, over the Christmas period, 16.75 hours scanning time was lost due to issues with the table sensors. The scan service resumed on Boxing day. No patient scans were cancelled.
- During inspection we saw evidence of monthly audits of waiting times over all sites by month which covered the host NHS trust opening hours, utilisation log, patient tracking, friends and feedback percentage returns for site by month, external hospitals data and extended days. The information was used to identify gaps in service and how to rectify them.
- Urgent appointment slots were kept in the diary to accommodate demand. If not utilised, they were allocated to other referrals to ensure sessions were booked to maximise capacity and maintain short waiting times.

Learning from complaints and concerns

- The service treated concerns and complaints seriously, investigated them and learned lessons from the results, and shared these with all staff.

Diagnostic imaging

- The service at the Cramlington site had not received any complaints in the 12 months before the inspection.
- There were complaint forms available for patients in the scanning room area which outlined how to make a complaint.
- Staff we spoke with told us if patients, relatives or carers raised an issue with them they would try to resolve it immediately. If they could not, they would encourage them to raise any concerns or issues with the most senior member of staff on duty or the person in charge of the unit in the first instance.
- Staff were empowered to attempt to resolve concerns locally wherever possible. Where a patient or relative chose to raise a 'formal' complaint, information leaflets explaining the process were available. Escalation pathways were available in each location where services were provided.
- There was a process for formal complaints to be logged and recorded using the organisations electronic risk management system. InHealth aimed to acknowledge all complaints within three working days and investigate and formally respond within 20 working days.
- InHealth operated a three stage complaints management policy; stage one was local resolution, which was an investigation and response coordinated by the local service CQC registered manager, stage two was an internal director review, and stage three was an external independent review. An external review was provided by either the Parliamentary Health Service Ombudsman for NHS funded patients or Independent Healthcare Sector Complaints Adjudication Service (ISCAS) for privately funded patients.
- Managers at all levels in the service had the right skills and abilities to run a service providing high-quality sustainable care.
- The regional management consisted of a director of operations north, a head of imaging services north and an operational manager who was also the registered manager and responsible for the other InHealth scan sites in the region.
- The operational manager supervised the superintendent radiographer who had responsibility for four senior radiographers, one post graduate radiographer three health care assistants and one senior radiographic assistant.
- The unit and the operational manager was supported by the regional InHealth head of imaging services.
- The management team were described as approachable, open and honest. The unit was described by staff we spoke with a, "a lovely environment to work in."
- Locally the unit was assisted by the local NHS trust deputy director of clinical cancer services, the trust operations services manager, the clinical governance lead and the trust chief executive director.

Vision and strategy

- The service had a vision for what it wanted to achieve and workable plans to turn it into action, which it developed with staff, patients, and local community groups.
- InHealth had four core values: Care, Trust, Passion and Fresh thinking and a company mission to 'Make Healthcare Better' the aim of which was to enable all employees to offer a fresh, innovative approach to the care delivered. All staff were introduced to these core values at the cooperate induction and these were linked to staff appraisals.
- InHealth have a mission statement on their internet page which is, to make healthcare better, which would be achieved by working with hospitals and commissioners across the NHS and independent sector.

Are diagnostic imaging services well-led?

Good 

We rated well-led as good.

Leadership

Diagnostic imaging

- The internet page also outlined the primary goal of the service which was to make healthcare better by providing rapid and accurate assessment of every patient's condition, enabling the right treatment to be delivered swiftly and effectively by specialist providers.
- The core values were displayed on the MRI office wall.

Culture

- Managers across the service promoted a positive culture that supported and valued staff, creating a sense of common purpose based on shared values.
- During the inspection staff told us they felt part of a team and everyone supported each other.
- We observed good team work and support during the inspection.
- Staff we spoke with told us that the quality of the scan was more important than the quantity of scans done.
- The staff we spoke were very positive about the department. They told us they felt the patient care was excellent and the ability to turnaround scan reports quickly was part of that. They all spoke about good communication between staff and positive management support to obtain additional training qualifications.
- Staff told us they felt they could raise any issues with their supervisors and they were able to maintain a good work life balance.

Governance

- The service systematically improved service quality and safeguarded high standards of care by creating an environment for excellent clinical care to flourish.
- We saw evidence InHealth operated a clinical governance framework which aimed to assure the quality of services provided.
- Quality monitoring was the responsibility of the location registered manager and was supported through the InHealth clinical quality team via the clinical governance framework and governance committee structure led by the director of clinical quality.

- We saw evidence of identified leads in governance and regulatory roles within the service with detailed how staff could contact them for advice.
- This included the quarterly risk and governance committee, clinical quality sub-committee, medicines management group, water safety group, radiation protection group, radiology reporting group and the weekly CLIC meeting for review of incidents and identification of shared learning.
- All those meetings had a standard agenda and outputs which included minutes and an action log which ensured actions to improve were recorded and monitored for completion to ensure a continuous improvement cycle.
- The operational manager submitted attended quarterly host trust meetings to discuss service delivery, key performance indicators, activity and downtime.
- During inspection we saw evidence InHealth held quarterly contract review meetings. We reviewed the minutes of the meeting held in October 2018. There was a set agenda with actions, updates and owners.
- We saw evidence the operational manager attended the quarterly trust magnetic resonance imaging meetings and the monthly trust clinical support and cancer services business unit meetings.
- We saw evidence the service reviewed information in their site management reports. We reviewed the reported dated January 2019 which covered data from October 2018. The areas reported on were; patient scans, staffing, staff personal development plans and appraisals, quality and governance and business development. There was an accompanying action plan complied by the site manager and reviewed by their line manager with areas identified where improvements could be made.
- The lead radiologist told us the department held daily meetings with staff. The purpose of the meetings was to confirm and check that day's work and to review the patient referral forms to identify any risk or concerns.
- There was a certificate of employers' liability insurance and CQC certificate of registration on display on the wall in the magnetic resonance imaging lobby.

Diagnostic imaging

- During inspection we saw evidence of regular local management team briefings with a set agenda and weekly team leader's meetings with a set agenda. The meetings were documented and actions noted.
- The service held bi-monthly staff meetings. The meetings had a set agenda, the meetings were documented, and actions noted.
- There was evidence the Superintendent radiographer held weekly team meetings with staff.
- Managers told us any important time critical information would be emailed to all the staff.
- The service had an information governance statement dated November 2018 due for review October 2023 which met the requirements of the NHS digital's data security and protection tool kit and ISO27001:2013 and was compliant with the data protection act.
- We saw evidence recently recruited staff had submitted an up to date disclosure and barring service check, photographic identification, proof of qualifications, proof of address and right to work in the UK.
- Individual risk assessments including clinical, general and local were updated and reviewed on an annual basis or as and when the risk changed.
- There was a system of risk assessments in place and risks with higher scores were added to the local risk register. Those with high post mitigation scores were added to the regional risk register.
- A quarterly report on new and updated risks were sent to the quarterly risk and governance committee where it was reviewed for comment and action as necessary.
- Support with risk assessments was provided by a health and safety advisor and the risk and governance lead who also advised registered managers on the correct process to add a risk to the risk register and how to complete the quarterly risk report.
- During inspection we reviewed 30 general risk assessments relating to the building and general systems of work, 48 clinical risk assessments and eight local site-specific risk assessments. All were in date and the information provided was current.
- During inspection we saw evidence 32 products stored at the Cramlington magnetic resonance imaging site had been Control of Substances Hazardous to Health (COSHH) assessed. There were 27 accompanying risk assessments which were in date.
- There was evidence patient risk was discussed at the clinical governance meeting. There was evidence the service held regular health and safety meetings. The minutes of the meeting for January 2019 were reviewed. The meeting covered matters arising from the previous meeting, new business and health and safety related items for discussion and actions with owners.
- The service had a current ISO/IEC 270001 certificate of approval. ISO/IEC 270001 specifies a management system that is intended to bring information security under management control and gives specific requirements. Organisations that meet the requirements may be certified by an accredited certification body following successful completion of an audit.

Managing risks, issues and performance

- The service had good systems to identify risks, plan to eliminate or reduce them, and cope with both the expected and unexpected.
- We saw evidence risks were assessed and recorded and where applicable recorded on the risk register and escalated to senior managers.
- Risk assessments were conducted regularly for all areas of the service and covered areas such as fire hazards, trip hazards, equipment safety and electrical safety.
- We saw evidence the local risk register was reviewed monthly and included an action plan to track progress on any current local issues or identified risks.
- Copies of the local risk registers were saved to the company intranet for review by the director of imaging services north. Any immediate concerns were raised with the head of imaging services north once identified and escalated concerns were reviewed and considered for the functional and corporate risk registers.

Engagement

Diagnostic imaging

- The service engaged with patients, staff, the public and local organisations to plan and manage appropriate services, and collaborated with partner organisations effectively.
- InHealth provided every service user the opportunity to complete the NHS friends and family test and indicate their likelihood to recommend the service. There was also an opportunity to add free text comments on any positive or negative aspects.
- The operational manager acknowledged because most patients being scanned were emergencies, and very ill, the opportunities for them to feedback was limited. In addition, because the patients were often emergency case they arrived unaccompanied, therefore there was no opportunity to receive feedback from friends or family. The level of returns was between 7-10%.
- Across all InHealth sites approximately 10,000 pieces of patient feedback were received and analysed each month. This data was made available to all service managers and staff in real time via the intranet and was used to improve services being provided.
- There was evidence InHealth understood occasionally things could go wrong within the provision of healthcare and encouraged patients to tell them when they had a concern or issue.
- The results were collated by an external company and delivered to service managers via the InHealth intranet weekly and via a web-based dashboard accessible to all managers. Service managers reviewed the results which summarised response rates. The average was 7% for the Cramlington location, and overall likelihood to recommend the service currently 98%.
- At the Cramlington site 98% of comments were complimentary this was from 406 of 420 forms submitted.
- The free text comments were interrogated to enable positive staff feedback and individuals could be praised. Negative comments were scrutinised for opportunities to drive improvement in the service which included changes to premises, staff training or patient information.
- Monthly friends and family results were viewable on the InHealth intranet and the InSite /Clinical Quality patient feedback reports section which were shared with staff by email.
- Comments including compliments and any learning opportunities were shared for to encourage staff to continually improve the patients' experience.
- Staff satisfaction surveys were undertaken annually to seek views of all employees within the organisation and actions plans implemented from the feedback received.
- During inspection we reviewed the employee survey outcomes action plan which showed all actions which had been completed.

Innovation, improvement and sustainability

- The service was committed to improving services by learning from when things went well or wrong, promoting training, research and innovation.
- Recent service developments included a pathway to set up to scan patients with conditional pacemakers. The pathway usually was two weeks from referral to scan. Some scans were declined because the pacemaker was not MRI compatible or there was no ability to switch it to MRI safe.
- The service had been scoping the possibility of setting up a post mortem magnetic resonance imaging service for the local area. It was anticipated that this new service would be available at Cramlington MRI in the coming six to 12 months. The purpose of this service was to meet the religious needs of deceased patients' families who's beliefs which did not allow post mortems as this was considered desecration of the deceased.
- We saw evidence of an audit of claustrophobic and large patients referred to InHealth for magnetic resonance imaging at North Tyneside, Wansbeck, Hexham and Cramlington Sites between October 2017-November 2018.
- The result of the audit showed the previous audit from October 2009 to June 2015 showed that the patients referred to the open scanner had almost doubled from 135 patients per year October 2009- 10 to 324 patients per year October 2013-14. This reduced significantly to

Diagnostic imaging

116 per year with the installation of the wider bore scanner at North Tyneside in February 2014. The wider bore scanner was installed at Wansbeck in September 2016.

Outstanding practice and areas for improvement

Outstanding practice

- The collaborative and mutually supportive nature of the relationship between the Trust and the InHealth MRI unit.
- Recruitment of highly skilled staff capable of working autonomously being able to identify and prioritise complex scans.
- The ability to scan patients with MRI compatible pacemakers.