

# Southampton PET-CT Centre

## Quality Report

Southampton PET-CT Centre  
Southampton University Hospital NHS Foundation  
Trust  
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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?

Not sufficient evidence to rate 

Are services caring?

Good 

Are services responsive?

Good 

Are services well-led?

Good 

#### Mental Health Act responsibilities and Mental Capacity Act and Deprivation of Liberty Safeguards

We include our assessment of the provider's compliance with the Mental Capacity Act and, where relevant, Mental Health Act in our overall inspection of the service.

We do not give a rating for Mental Capacity Act or Mental Health Act, however we do use our findings to determine the overall rating for the service.

# Summary of findings

Further information about findings in relation to the Mental Capacity Act and Mental Health Act can be found later in this report.

# Summary of findings

## Letter from the Chief Inspector of Hospitals

Southampton PET-CT Centre is operated by Alliance Medical Limited. Southampton PET-CT Centre provides PET-CT scanning at University Hospital Southampton NHS Trust, Southampton, Hampshire.

NHS England commissions the service to carry out 2700 scans every year and is supported by the local NHS trust.

The service provides a diagnostic imaging service for adults and children who require a PET-CT scan. A PET-CT scan is a combination of a PET (positron emission tomography) scan and a CT (computerised tomography) scan. The PET scan shows how active cells are in different parts of the body using a radioactive injection. The CT scan takes a series of images to build this information into 3D pictures of the inside of body. Local governance was monitored through regular meetings with the Administration of Radioactive Substances Advisory Committee (ARSAC) holder (a specialist licensed radiologist) in the NHS trust. The service was also supported by the NHS trust medical physics team who provided a Radiation Protection Advisor, a Medical Physics Expert and Radioactive Waste Advisor.

We inspected this service using our comprehensive inspection methodology. We carried out the inspection on 10 December 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.

### Services we rate

We rated it as **Good** overall.

The service had enough staff to care for patients and keep them safe. Staff had training in key skills, understood how to protect patients from abuse, and managed safety well. Staff assessed risks to patients, acted on them and kept good care records. They managed medicines well. The service managed safety incidents and learned lessons from them.

Staff provided good care and treatment, offered patients a drink and biscuits following their scan, and gave pain relief advice when they needed it. Managers monitored the effectiveness of the service and made sure staff were competent. Staff worked well together for the benefit of patients, supported them to make decisions about their care, and had access to good information.

Staff treated patients with compassion and kindness, respected their privacy and dignity, took account of their individual needs, and answered any questions patients had. They provided emotional support to patients, families and carers.

The service planned care to meet the needs of local people, took account of patients' individual needs, and made it easy for people to give feedback. People could access the service when they needed it.

Leaders ran services well using reliable information systems and supported staff to develop their skills. Staff understood the service's vision and values, and how to apply them in their work. Staff felt respected, supported and valued. They were focused on the needs of patients receiving care. Staff were clear about their roles and accountabilities. The service engaged well with patients and the community to plan and manage services and all staff were committed to improving services continually.

However:

# Summary of findings

The location of paediatric resuscitation equipment was not included in staff information to direct staff in an emergency. The registered manager addressed this concern immediately after the inspection.

Two environmental radiation detection monitors and six personal radiation detection monitors had not been calibrated which was overdue since September 2019, and therefore these monitors were not shown to be effective in detecting radiation.

Following this inspection, we told the provider that it should make some improvements, even though a regulation had not been breached, to help the service improve. Details are at the end of the report.

Nigel Acheson

Deputy Chief Inspector of Hospitals (London and South)

# Summary of findings

## Our judgements about each of the main services

### Service

#### Diagnostic imaging

### Rating

Good



### Summary of each main service

Southampton PET-CT centre provided PET-CT imaging for NHS patients and some private patients of all ages.

We rated this service as good because it was safe, caring, responsive and well-led. We do not rate effective for this type of service.

# Summary of findings

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Good 

# Southampton PET-CT Centre

**Services we looked at**

Diagnostic Imaging

# Summary of this inspection

## Background to Southampton PET-CT Centre

Southampton PET-CT Centre is operated by Alliance Medical Limited. The service opened in 2015, when it was provided Alliance Medical Limited mobile services. In June 2017 the current modular unit was fully commissioned and ready for use. Patients are referred from NHS Trusts across Hampshire and Isle of Wight as well as the Channel Islands.

Southampton PET-CT current registered manager had been in post since June 2017. From December 2015 to June 2017, it was a central Alliance Medical registered manager.

## Our inspection team

The team that inspected the service comprised a CQC lead inspector and a specialist advisor with expertise in diagnostic imaging. The inspection team was overseen by Catherine Campbell, Head of Hospital Inspection.

## How we carried out this inspection

During the inspection, we visited the scanning service. We spoke with six staff including the registered manager,

technologists, radiographers, clinical assistants and an administrator. We spoke with seven patients and one relative. During our inspection, we reviewed seven sets of patient records.

## Information about Southampton PET-CT Centre

The service is registered to provide the following regulated activities:

- Diagnostic and screening procedures.

From 1 September 2018 to 30 September 2019 the service carried out 2665 scans.

There were no special reviews or investigations of the hospital ongoing by the CQC at any time during the 12 months before this inspection. This was the services first inspection since registration with CQC.

The service employed a unit manager (who was also the registered manager), radiologists under a practising privileges arrangement, radiographers, technologists, clinical assistants and administrators.

Track record on safety: There were no incidences of hospital acquired methicillin-resistant staphylococcus aureus (MRSA), hospital acquired methicillin-sensitive staphylococcus aureus (MSSA), hospital acquired Clostridium difficile (C. Diff) or hospital acquired E-Coli.

The service received seven complaints from 1 September 2018 to 30 October 2019.

### Services accredited by a national body:

Quality Standard for Imaging (QSI) Jul-18 Jul-21 Whole Organisation

ISO27001 Jun-18 Jun-21 Whole Organisation

Investors in People (IIP) Mar-19 Mar-20 Whole Organisation

### Services provided at the hospital under service level agreement:



# Summary of this inspection

- Clinical and or non-clinical waste removal
- Cleaning services
- Laundry
- Radiation protection services
- Two radiologists who were the two Administration of Radioactive Substances Advisory Committee (ARSAC) license holders for the service.
- Resuscitation

# 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 it as **Good** because:

**Good**



- The service provided mandatory training in key skills to all staff and made sure everyone completed it.
- Staff understood how to protect patients from abuse and the service worked well with other agencies to do so. Staff had training on how to recognise and report abuse and they knew how to apply it.
- The service controlled infection risk well. Staff used equipment and control measures to protect patients, themselves and others from infection. They kept equipment and the premises visibly clean.
- Staff completed and updated risk assessments for each patient and removed or minimised risks. Staff identified and quickly acted upon patients at risk of deterioration.
- The service had enough staff with the right qualifications, skills, training and experience to keep patients safe from avoidable harm and to provide the right care and treatment. Managers regularly reviewed and adjusted staffing levels and skill mix, and gave bank, agency and locum staff a full induction.
- Staff kept detailed records of patients' care and treatment. Records were clear, up-to-date, stored securely and easily available to all staff providing care.
- The service used systems and processes to safely administer, record and store medicines.
- The service managed patient safety incidents well. Staff recognised incidents and near misses 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.
- The design, maintenance and the use of facilities and premises were managed by the service and kept people safe. Staff managed clinical waste well.

However, we also found the following issues that the service provider needs to improve:

- Signage by the telephones for the location of paediatric resuscitation equipment was not included to direct staff in an emergency.

# Summary of this inspection

- Two environmental radiation detection monitors and six personal radiation detection monitors had not been calibrated which was overdue since September 2019, and therefore these monitors were not shown to be effective in detecting radiation.

## Are services effective?

We do not rate effective for this type of service:

- The service provided care and treatment based on national guidance and evidence-based practice. Managers checked to make sure staff followed guidance.
- Staff gave patients enough food and drink to meet their needs.
- Staff assessed and monitored patients regularly to see if they were in pain and gave pain relief advice in a timely way.
- Staff monitored the effectiveness of care and treatment. They used the findings to make improvements and achieved good outcomes for patients.
- The service made sure staff were competent for their roles. Managers appraised staff's work performance to provide support and development.
- All those responsible for delivering care worked together as a team to benefit patients. They supported each other to provide good care and communicated effectively with other agencies.
- Staff supported patients to make informed decisions about their care and treatment. They knew how to support patients who lacked capacity to make their own decisions.

Not sufficient evidence to rate



## Are services caring?

We rated it as **Good** because:

- Staff treated patients with compassion and kindness, respected their privacy and dignity, and took account of their individual needs.
- Staff provided emotional support to patients, families and carers to minimise their anxiety.
- Staff supported and involved patients, families and carers to understand their care and treatment.

Good



## Are services responsive?

We rated it as **Good** because:

- The service planned and provided care in a way that met the needs of local people and the communities served. It also worked with others in the wider system and local organisations to plan care.

Good



# Summary of this inspection

- The service was inclusive and took account of patients' individual needs and preferences. Staff made reasonable adjustments to help patients access services. They coordinated care with other services and providers.
- People could access the service when they needed it and received the right care promptly. Waiting times from referral to treatment and arrangements to admit, treat and discharge patients were in line with national standards.
- It was easy for people to give feedback and raise concerns about care received. The service treated concerns and complaints seriously, investigated them and shared lessons learned with all staff.

## Are services well-led?

We rated it as **Good** because:

- Leaders had the integrity, skills and abilities to run the service. They understood and managed the priorities and issues the service faced. They were visible and approachable in the service for patients and staff.
- The service had a vision for what it wanted to achieve and a strategy to turn it into action, developed with all relevant stakeholders. The vision and strategy were focused on sustainability of services and aligned to local plans within the wider health economy. Leaders and staff understood and knew how to apply them and monitor progress.
- Staff felt respected, supported and valued. They were focused on the needs of patients receiving care. The service promoted equality and diversity in daily work and provided opportunities for career development. The service had an open culture where patients, their families and staff could raise concerns without fear.
- Leaders operated effective governance processes, throughout the service and with partner organisations. Staff at all levels were clear about their roles and accountabilities and had regular opportunities to meet, discuss and learn from the performance of the service.
- The service used systems to manage performance effectively. They identified and escalated relevant risks and issues and identified actions to reduce their impact. They had plans to cope with unexpected events. Staff contributed to decision-making to help avoid financial pressures compromising the quality of care.
- The service collected reliable data and analysed it. Staff could find the data they needed, in easily accessible formats, to

**Good**



# Summary of this inspection

understand performance, make decisions and improvements. The information systems were integrated and secure. Data or notifications were consistently submitted to external organisations as required.

- Leaders and staff actively and openly engaged with patients and staff to plan and manage services. They collaborated with partner organisations to help improve services for patients.
- All staff were committed to continually learning and improving services.






# Detailed findings from this inspection

## Overview of ratings

Our ratings for this location are:

	Safe	Effective	Caring	Responsive	Well-led	Overall
Diagnostic imaging	Good	Not rated	Good	Good	Good	Good
Overall	Good	Not rated	Good	Good	Good	Good

# Diagnostic imaging

Safe	Good 
Effective	Not sufficient evidence to rate 
Caring	Good 
Responsive	Good 
Well-led	Good 

## Are diagnostic imaging services safe?

Good 

### Mandatory training

**The service provided mandatory training in key skills to all staff and made sure everyone completed it.**

Staff received training in areas relevant to their role, including radiation risks, health and safety, equality and diversity, information governance, moving and handling and resuscitation.

Compliance targets for training was 100%. Staff were reminded by email 60 days and 30 days before the expiry date of their training to book an update course. Records showed the service met the 100% mandatory training target across all subject areas.

Mandatory training was delivered using a mixture of face to face training and online learning. Staff told us there were no obstacles to accessing the training. Staff were able to complete their training within work hours.

### Safeguarding

**Staff understood how to protect patients from abuse and the service worked well with other agencies to do so. Staff had training on how to recognise and report abuse and they knew how to apply it.**

Staff received training specific for their role on how to recognise and report abuse. All staff had completed safeguarding adult level 2 training and safeguarding children level 2 training. This met intercollegiate guidance 'Safeguarding Children and Young People: Roles and

competencies for Health Care Staff' (January 2019) and the intercollegiate guidance 'Adult Safeguarding: Roles and Competencies for Health Care Staff First edition: August 2018'

The provider had an overall safeguarding lead and separate children's and adult safeguarding leads who staff could contact for advice and support. The provider's child safeguarding lead was trained to safeguarding level 4.

Conversations with staff showed they had a good understanding about how to recognise possible abuse and knew what actions they must take if they suspected someone had been subject to abuse.

Senior staff had displayed posters in the scanning room to prompt staff to follow the Society and College of Radiographers 'Have you paused and checked?'. We saw staff followed this six-point safety check list that ensured the right patient had the right radiological scan at the right time.

### Cleanliness, infection control and hygiene

**The service controlled infection risk well. Staff used equipment and control measures to protect patients, themselves and others from infection. They kept equipment and the premises visibly clean.**

The service reported there had been no hospital acquired infections in the 12-month period prior to the inspection.

Infection control was included in mandatory training for staff. The annual infection and prevention control audit dated September 2019 showed the service scored 98%

# Diagnostic imaging

for compliance with the organisation's hand hygiene policy and 100% compliance with staff following the organisation's process for insertion of peripheral vascular devices.

Staff followed infection control policy including the use of personal protective equipment. During the inspection we saw staff washed their hands after and prior to patient contact and all met the organisation's bare below elbow policy in clinical areas. Personal protective equipment such as disposable aprons and gloves were readily available. Wall mounted hand gel sanitisers were readily available in all areas.

Cleaning records were up to date and showed that all areas were cleaned regularly. The waiting room, patient uptake cubicles and the imaging area were visibly clean and well organised.

Staff used sharps bins to dispose safely of sharp equipment. This included dedicated bins to collect and dispose of radioactive waste. Staff had assembled bins correctly, dated, secured and not over filled them. Radioactive waste including sharps and linen were stored at the service for three days before being disposed of through the local acute trust's systems.

All privacy curtains included dates when last changed. The service policy was to change the disposable curtains every six months or when soiled. Records showed that staff had last changed the curtains on the 6 September 2019.

## Environment and equipment

**The design, maintenance and use of facilities, premises were managed well by the service kept people safe. Staff managed clinical waste well. Staff were trained to use equipment but did not always manage it well. The environmental monitors for detecting radiation were overdue calibration and the staff electronic personal radiation detection monitors.**

The service was in a purpose built unit located in the grounds of an NHS hospital. Car parking near to the unit was available, which included disabled parking. The entrance was at the front of the unit through an automatic opening door into the waiting room, where the reception area and manager's office was located.

Security controlled areas included a control room, three uptake cubicles where patients waited one hour for the radioactive medicine to be absorbed by the body before the scan. Staff stored and dispensed radioactive medicines from the 'hot lab'. A hot lab is where PET-CT Radiographers / Technologists prepared the radioactive medicines needed to perform the scan. There was also a separate toilet for patients who had received the radioactive medicine, as the patients would be radioactive immediately after injection. A toilet was available in the waiting room, for people who had not had ionising radiation.

There was enough space around the scanner for staff to move and for scans to be carried out safely. Patients are visually monitored by PET-CT Radiographers / Technologists and Clinical Assistants during their scan. Patient's are also monitored by CCTV and have microphone contact with the scanning team at all times. Eye masks could be requested for those patients that experience claustrophobia.

The service had a spillage kit to use in case of spillage of the radioactive medicines. Staff knew where this was located and knew how to use it.

The service was subject to planned external environmental agency inspections. We reviewed the most recent report dated August 2019, which showed there had been no concerns found with the management and safety of the environment and equipment at that time.

Staff carried out quality assurance tests at the beginning of each scanning session. This ensured the scanning equipment was calibrated correctly and was in safe working order. Records showed arrangements were to ensure that specialist equipment was serviced in accordance with manufacturers requirements. This was supported by the organisation's planned preventive maintenance programme, that ensured equipment was in safe working order.

There was a service level agreement with the NHS hospital for a range of ancillary services including waste disposal and resuscitation. The Southampton PET-CT Centre had one item of paediatric emergency equipment in their first aid box. All other emergency resuscitation equipment was shared with the NHS outpatient neurology department next to the unit and with the trust academic library. As the neurology outpatient



# Diagnostic imaging

department closed at 6pm, from 6pm to 8pm staff accessed resuscitation equipment in the library. At the inspection we found that staff checked equipment was present in neurology outpatients, but not the library. Whilst there was signage by the telephone for location of trust adult resuscitation equipment this was not the case for the paediatric equipment to direct staff in an emergency. The registered manager on the day of the inspection updated all signage, the site file and spoke with staff to update them.

On the Friday before our inspection the registered manager told us a decision had been made that staff should also check weekly that trust staff had checked the resuscitation equipment, and to see all equipment was present. At our inspection the resuscitation checklist for November 2019 and up until 17 December 2019 in the neurology department was fully completed. In the academic library for a similar period there was one day with no signature to show the equipment had been checked.

Two environmental monitors had not been calibrated when due in September 2019, and therefore these monitors were not shown to be effective in detecting radiation. This meant staff could not immediately confirm how much radiation there was in patient and staff areas. The registered manager following our inspection sent out one meter for calibration week starting 16 December 2019. The second monitor was due to be sent for calibration in January 2020. The registered manager on 5 February 2020 confirmed that both environmental monitors had been calibrated.

Staff wore film badges and special finger stalls to monitor individual staff members radiation doses. The film badge and finger stalls were used to measure and record radiation exposure of the staff to ensure it was within safe limits. These were processed by an external third party and the results reviewed by the service manager monthly. The quality account 2018/2019 for Alliance Medical Limited noted that nationally there had been 56 results that exceeded Alliance Medical Limited dose investigation levels. Service managers investigated these incidents and corrective actions that included a review of staff practice followed. None of the radiation exposure breaches had occurred at Southampton PET-CT Centre.

Staff also wore electronic personal radiation detection monitors to increase their awareness of radiation in the

environment. The six electronic personal radiation detection monitors had not been calibrated and were overdue since September 2019, and therefore these were not shown to be effective in detecting radiation. The registered manager had requested replacements from their head office, before the existing personal monitors could be sent off for calibration. The registered manager informed us on the 16 December 2019, the head office was awaiting stock of the electronic personal radiation detection monitors. Therefore the calibration remained overdue. The registered manager confirmed on 5 February 2020, that four of electronic personal radiation detection meters had been calibrated, with two remaining to be sent for calibration.

## Assessing and responding to patient risk

**Staff completed and updated risk assessments for each patient and removed or minimised risks. Staff identified and quickly acted upon patients at risk of deterioration.**

The staff followed processes to ensure the right person received the right radiological scan at the right time. Staff checked each patient's identity, medical history and pregnancy risk, applying a six-point check. The risk assessment process included checking the imaging was needed and appropriate.

If a patient deteriorated, the service had access to the acute trust medical services. This included the acute trust's resuscitation team. All clinical staff were trained to intermediate life support standard for both adults and children.

Staff followed the organisation's significant pathology pathway if urgent or unexpected findings were found during the imaging procedure. This meant patients images were reported urgently so treatment could be started.

Staff followed process to ensure patients' blood sugar levels were inside the preferred range for the scanning process. High levels of glucose can affect the accuracy of the results of the imaging. Staff tested patients' blood for glucose levels in line with best practice. If patient's blood glucose levels were outside the preferred range, staff contacted the Administration of Radioactive Substances Advisory Committee (ARSAC) licence holder to check if the scan should go ahead. This reduced the risk of patients' exposure to unnecessary levels of radiation that

# Diagnostic imaging

had no diagnostic benefit. In these instances, the patient was given advice about how to manage their blood sugar levels, so the scan could be carried out on an alternative date. The ARSAC licence holder is the doctor who handles or administers radioactive medicines. It is a legal requirement that all PET-CT scanning services must have an ARSAC license holder to administer or give other staff authorisation to administer the radioactive medicines.

Following staff administration of the radioactive medicine, the patient needed to wait for one hour for the medicine to be absorbed by the body. Staff told patients to stay as still as possible to prevent absorption of the radioactive medicine to the muscles and ensure it went to the parts of the body needed for scanning. This reduced the risk of patients having to have repeated scans and additional exposure to radiation because of poor quality imaging that was not fit for diagnostic purposes.

The referral process meant staff were made aware of any specific risk issues for patients, such as risk of falls and pressure ulcers.

We saw risk assessments such as the handling of hazardous substances safely, local rules for radiation safety and accidental dropping of a radiopharmaceuticals. Staff explained the actions they would take on the event of any of these happening.

There were closed circuit cameras in all areas, with signs informing patients that this was for safety reasons. This meant staff observed patients, checking for their wellbeing, without having to disturb and possibly reduce the effect of the radioactive medicine as well as decreasing the staff occupational radiation dose. Patients were visually monitored by staff during their scan, through CCTV and direct observation through the window between the scanning room and the control room. In the patient uptake cubicles, the CCTV was positioned outside the privacy curtain when drawn, so patients could dress and undress if needed without being seen. Call bells were accessible in-patient uptake cubicles, toilet and scan rooms. There was a checklist signed by staff to confirm the call bells were working on days the service operational.

The imaging room was clearly signposted with warning lights to warn staff when ionising radiation was being used. Staff put a hazard barrier strap across the door into the imaging room when ionising radiation was in use.

In line with legislation, a radiation protection advisor and anamed Administration of Radioactive Substances Advisory Committee (ARSAC) license holder supported the service. This was to minimise unintended, excessive or incorrect medical exposures, to ensure the benefits outweighed the risks of each exposure and to keep doses in diagnostics “as low as reasonably practicable” for their intended use.

## Staffing

**The service had enough staff with the right qualifications, skills, training and experience to keep patients safe from avoidable harm and to provide the right care and treatment. Managers regularly reviewed and adjusted staffing levels and skill mix, and gave bank, agency and locum staff a full induction.**

The service was staffed in accordance with the provider’s ‘staffing requirements to support a safe scanning pathway’ policy. This matched the number and roles of staff needed to be on duty to deliver set numbers of PET-CT imaging. This meant there were enough staff on duty to safely deliver the service and minimised staff handling of radioactive medicines daily to keep their occupational radiation as low as possible.

The service also had clinical assistants who supported the scanning pathway for patients from the opening time to closing time. Their key role was to support the patients and keep computer records.

The service employed an administrator, who coordinated patient appointments at Southampton PET-CT Centre. This included supporting with transport for patients travelling to and from the Channel Islands.

Staffing at the service was made up of a 0.5 whole time equivalent (WTE) unit manager, one clinical lead PET-CT technologist, one PET-CT technologist, two radiographers, two clinical assistants and one administrator. The manager told us if needed, staffing to cover absence would be from another Alliance Medical location either static or mobile, or on occasions appropriate agency staff.

# Diagnostic imaging

The provider consultant engagement lead managed the consultant radiologists. Reporting consultants either worked under a service legal agreement for the local NHS trust, or under a practising privileges arrangement with the provider. There were two consultants who were Administration of Radioactive Substances Advisory Committee (ARSAC) licence holders who were consultants working at the local NHS trust, employed under a service level agreement with Southampton PET-CT centre.

## Records

**Staff kept detailed records of patients' care and treatment. Records were clear, up-to-date, stored securely and easily available to all staff providing care.**

Patient's individual care records were written and managed according to best practice. We reviewed seven patient records. Records were accurate, complete, legible, up to date and stored securely. Records were electronic and available for access by staff. Staff shredded paper records such as paper referrals according to the provider's policy once the information was uploaded.

The radiology information system (RIS) and picture archiving and communication system (PACS) used by the service was secure and password protected. Each member of staff had their own personally identifiable password.

Patient and clinical information was recorded on the provider's electronic records system. This system was not integrated with the referrer's data management system, however there was a secure system to ensure necessary information was shared, such as reports and images from the PET-CT scan.

## Medicines

**The service used systems and processes to safely administer, record and store medicines.**

Staff administered radioactive medicines to patients under the authorisation of the Administration of Radioactive Substances Advisory Committee (ARSAC) license holder, a consultant based at the local acute trust working under a service level agreement for the provider. Patient group directives were not needed. Medicines

management training was included in the mandatory training. Records we viewed during inspection were kept for staff authorised to administer radiopharmaceuticals and showed that 100% of staff were compliant with this.

The radioactive pharmaceutical decays with a radioactive half life of 111 mins. In order to correctly order enough radiopharmaceutical each dose is ordered per patient and calibrated at the appropriate patients' appointment time. The doses are delivered daily and more than one delivery may be necessary to complete the days scanning.

Staff stored radioactive medicines in a dedicated secure room, known as the 'hot lab', that had key-pad entry. Staff recorded the height and weight of the patient and entered on a spreadsheet, so they could calculate the amount of radiopharmaceutical needed for each individual patient. Staff gave patients a radioactive medicine intravenously as a tracer for the PET-CT scan. The scan used a small amount of the medicine to show differences between healthy and diseased tissue.

Staff described the quality control process followed to ensure the radioactive medicine was safe to use. The radioactive medicine was provided by the closest radiopharmacy production unit, that may or may not be part of Alliance Medical Limited. Once the quality assurance processes were completed by the radiopharmaceutical department, Southampton PET-CT Centre was provided with a code that allowed staff to open the container the radioactive medicine was delivered in. This ensured that only radioactive medicines that were safe to use and would produce good quality images were used.

The staff had an auto dispenser for one of the radioactive medicines used. This reduced the potential risk of radiation dose to staff when drawing the radioactive medicine into the syringe. For another radioactive medicine used for some of the scans undertaken on a Tuesday and Friday, staff did need to draw up using a syringe. Staff drew this radioactive medicine dose up by hand in a shielded syringe, measured it for the correct dose, administered it to the patient and disposed of the syringe in a dedicated shielded sharps bin.

The service did not use any controlled medicines for any of their procedures and therefore did not need a controlled medicines policy.

# Diagnostic imaging

An organisational pharmacy advisor was available if needed. The pharmacist issued guidance and support at a corporate level and worked collaboratively with the clinical quality team on all issues related to medicines' management.

The registered manager was the service lead for the safe and secure handling of medicines.

Patients were given information within their appointment letter detailing what medicines they had been given. In the unlikely event that patients felt unwell due to the scan, they are directed to seek advice from their GP or their local NHS emergency department.

## Incidents

**The service managed patient safety incidents well. Staff recognised incidents and near misses 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.**

Staff knew what incidents to report and how to report them using the providers electronic incident reporting system. Staff told us they reported and received feedback about incidents.

Learning from incidents (both at a service level and at an organisational level) was shared with staff through a monthly risk bulletin titled 'Risky Business' and through staff meetings and conversations.

The service reported there had not been any never events or serious incidents in the period 1 September 2018 to 30 October 2019. Never events are serious patient safety incidents that should not happen if healthcare providers follow national guidance on how to prevent them. Each never event type has the potential to cause serious patient harm or death but neither need have happened for an incident to be a never event. There had been no Ionising Radiation (Medical Exposure) Regulations reportable incident in the same period.

Staff we spoke to could describe duty of candour. The duty of candour is a statutory (legal) duty to be open and honest with patients (or 'service users'), or their families,

when something goes wrong that appears to have caused or could lead to significant harm in the future. No action under the duty of candour was needed with the incidents that occurred during the period.

## Are diagnostic imaging services effective?

Not sufficient evidence to rate 

### Evidence-based care and treatment

**The service provided care and treatment based on national guidance and evidence-based practice. Managers checked to make sure staff followed guidance.**

Staff followed best practice guidance, including Administration of Radioactive Substances Advisory Committee and Ionising Radiation (Medical Exposure) Regulations.

Policies and procedures were followed at provider level and site-specific level for the service. Local procedures reflected organisational policy in relation to Ionising Radiation Regulations (2017). Ionising Radiation Regulations regulate the protection against exposure to ionising radiation because of work activity.

Records showed all staff members signed to confirm they had read and agreed to abide by the policies or procedures.

### Nutrition and hydration

**Staff gave patients enough food and drink to meet their needs.**

Patients were sent information with instructions about fasting before the scan. Staff encouraged patients to drink water while waiting for the scan to support radiopharmaceutical uptake.

Following the scan patients were able to have a hot drink and biscuits before leaving the service. Facilities were provided within the waiting area.

### Pain relief

# Diagnostic imaging

## **Staff assessed and monitored patients regularly to see if they were in pain and gave pain relief advice in a timely way.**

Staff did not use a formal pain assessment tool but spent time checking the patient was comfortable during the procedure. Staff used blocks and pillows to position patients as comfortably as possible before the scan started. Due to the nature of the service, it was expected patients self-managed their pain prior to their appointments. However, if a patient expressed concerns about pain, this was assessed on an individual basis and staff provided guidance and support to manage the situation accordingly.

Staff did not administer pain relieving medicines, but patients were encouraged to bring their own pain killers with them to the scan if needed.

### **Patient outcomes**

#### **Staff monitored the effectiveness of care and treatment. They used the findings to make improvements and achieved good outcomes for patients.**

Records showed that performance was monitored monthly. Areas monitored included incidents, training compliance, patient satisfaction and complaints.

The service had an audit schedule. Records showed this included an annual infection prevention and control audit, a bi-annual policy audit, monthly reporting image quality audits, referral to scan time and scan to report published time.

The service sent 10% of reported scans for a quality control second reporting within the organisation. The registered manager reported there had been no concerns about the quality of referral, image quality or report quality for Southampton PET-CT Centre reporters. From 1 September 2018 to 30 October 2019 there were no re-scans needed at Southampton PET-CT Centre.

### **Competent staff**

#### **The service made sure staff were competent for their roles. Managers appraised staff's work performance to provide support and development.**

The providers central human resources department managed the recruitment process. This included checks

with the Disclosure and Barring Service (DBS), obtaining of references and interviews to provide assurance staff had the necessary skills and experience and were suitable to work in a health care environment. The interviews were then carried out locally after candidates were shortlisted by the recruiting manager.

All new staff members, including bank staff, completed an induction programme that included induction to the company and to Southampton PET-CT Centre. Staff we spoke with, confirmed they completed an induction programme when they started working for the service. Agency and bank staff completed a local induction checklist with the registered manager or the clinical lead. This assessed their knowledge of their discipline, gave them awareness of the key practices and protocols specific to the service and awareness of the environment and key equipment, such as emergency exits and emergency equipment.

Staff received annual appraisals and all staff had received an appraisal within the 12 months prior to the inspection.

Each staff member kept a paper file of training attended. This included mandatory training and competencies relevant to their role. We viewed staff training files which confirmed records of the training and competencies.

The consultant engagement lead explained there was a process for reporting consultants employed under a practising privileges arrangement. The information requested included a PET reporter experience form, a current CV, submission of their most recent appraisal and the completion of a PET-CT practising privileges application form.

Staff told us they were encouraged and supported to attend courses linked to their field, to keep up to date on practices and refresh current skills.

### **Multidisciplinary working**

#### **All those responsible for delivering care worked together as a team to benefit patients. They supported each other to provide good care and communicated effectively with other agencies.**

There was effective internal multidisciplinary team working that included service staff and the wider organisation. Staff we spoke to described close and happy working relationships between all grades of staff.



# Diagnostic imaging

Southampton PET-CT Centre had access to a radiologist or nuclear medicine consultant during all operational hours. This meant if staff found an urgent finding, advice could be sought immediately and acted upon using the significant pathology pathway. Staff in the service felt supported by the NHS trust by the agreements that were relating to the management of the deteriorating patient, cleaning, general waste disposal, and waste disposal.

The administration team had a daily conference call with the provider's South PET booking team to discuss the service referral numbers. That included any outstanding patients to be booked and the available appointments. The service liaised with the NHS multi-disciplinary team co-ordinators with any concerns or impact to patient pathways. The service had a contact in the Jersey/ Guernsey travel office as well as the local NHS trust to meet the needs of the overseas patients in relation to obtaining flights and funding.

The service worked with the trust's inpatient areas to ensure effective handover of clinical care and continuity of care for inpatients attending the service. Inpatients who had a PET-CT scan received a radiation safety sheet to inform staff, family and friends about the care of a patient following a PET-CT scan.

Managers met regularly with the NHS trust to review service performance, and this was fed back through staff meetings at the service.

## Seven-day services

The service was not open seven days a week. It ran four days a week Monday, Tuesday, Thursday and Friday apart from bank holidays. If demand increased, with the Administration of Radioactive Substances Advisory Committee (ARSAC) permission, a Saturday service could be provided to ensure patients healthcare needs were met.

## Consent and Mental Capacity Act

**Staff supported patients to make informed decisions about their care and treatment. They knew how to support patients who lacked capacity to make their own decisions.**

Staff understood their responsibility to gain consent from patients. They recognised and respected a patient's choice if they chose not to have any imaging when they arrived for their appointment.

Staff said they explained the imaging procedure to patients and obtained written consent for the scan through use of the provider's PET-CT safety consent form. Patients we spoke with confirmed this happened.

Staff were aware of their responsibility in relation to patients who lacked mental capacity to decide about undergoing a PET-CT scan. They said they would normally receive information in the referral about a patient's capacity, for example from their GP or hospital doctor, and they understood the Mental Capacity Act 2005. Staff spoke with us about a patient who did not have capacity to consent and was referred back to their referring clinician.

## Are diagnostic imaging services caring?

Good 

## Compassionate care

**Staff treated patients with compassion and kindness, respected their privacy and dignity, and took account of their individual needs.**

We saw three patient appointments during our inspection and found that staff were polite and friendly towards all the patients. All staff introduced themselves and spoke clearly to ensure patients fully understood why they were attending the service and what would happen whilst they were there. Patients were also given time to answer questions and ask any questions they may have had about the procedure. Two patients commented "all good" and "absolutely superb".

Staff used curtains to support privacy for patients in the uptake cubicles.

Patients were escorted to and from the examination rooms by clinical assistants, who we saw being supportive and sensitive to their needs. This included clinical assistants lowering a privacy blind between the scanning room and control room while they were preparing patients for the scan.

# Diagnostic imaging

Patients were encouraged to provide feedback about the service. Feedback was used to monitor the standard of the care provided. The registered manager showed us the feedback which was nearly all positive about the care provided. The response rate in June 2019 was 30%, but with a change to how the surveys were shared with patients, in August 2019 the response rate was 89% and in September 2019 86%. The few concerns raised were nearly all related to the delivery of the radioactive medicine, and not the way staff interacted with patients.

## Emotional support

### Staff provided emotional support to patients, families and carers to minimise their anxiety.

Music was available for patients to help them relax whilst in the uptake cubicles for one hour, to wait for the radioactive medicine to be absorbed by the body. Music was also available whilst in the scanner. A patient during our inspection had requested having music on whilst having their scan. The uptake cubicles also had relaxing scenes of tropical beaches, to support patients in feeling calm.

If patients were claustrophobic they were offered a trial run, or to talk over the procedure with their GP in case the possibility of an oral sedative was considered appropriate. Patients were booked for longer time slots if needed to support with meeting their emotional needs.

The unit had chaperone signs should a patient wish to have a chaperone.

## Understanding and involvement of patients and those close to them

### Staff supported and involved patients, families and carers to understand their care and treatment.

Staff telephone conversations to book appointments with patients were followed up with emailed information confirming the discussion. Patients were encouraged to contact the service with any concerns. Patients we spoke with told us how the information they received pre-appointment was helpful.

We saw staff talking to patients sensitively and appropriately, dependent on the individual need.

Patients and families, we spoke with told us that staff gave them information in a manner that they understood.

Staff spent time with each patient prior to their scan. The patients' medical history, safety questions and contraindications were discussed to ensure that they understood the whole procedure. Patients were encouraged to ask questions and confirm their understanding of the PET-CT scan procedure.

Staff told patients that the results of their diagnostic images would be sent back to their referring consultant.

We saw on the Southampton PET-CT Centre website that for patients who were paying for themselves or claiming with private medical insurance, guidance for patients was provided.

## Are diagnostic imaging services responsive?

Good 

## Service delivery to meet the needs of local people

### The service planned and provided care in a way that met the needs of local people and the communities served. It also worked with others in the wider system and local organisations to plan care.

The service provided care and treatment for patients referred from the local NHS trust as part of a commissioned NHS England contract. The service also scanned privately insured and self-funded patients.

The service opened Monday, Tuesday, Thursday and Friday. The service opened on a Saturday when needed due to patient needs. Appointments with patients were made by telephone and confirmed by email and letter. The service gave patients a choice of the provider's PET-CT centres they could attend for their scan, offering alternative centres as well as the Southampton PET-CT centre. Staff provided information about the scan and pre-scan preparations, directions and a map to the service and contact details for queries.

The service sometimes scanned children. The service told us that children were booked as part of a whole pathway, therefore they were treated as an inpatient and brought straight into the service without waiting.

## Meeting people's individual needs

# Diagnostic imaging

**The service was inclusive and took account of patients' individual needs and preferences. Staff made reasonable adjustments to help patients access services. They coordinated care with other services and providers.**

Patients' individual needs were accounted for. Staff delivered care in a way that took account of the needs of different patients on the grounds of age, disability, gender, ethnicity, religion or belief and sexual orientation. Staff had received training in equality and diversity and had a good understanding of cultural, social and religious needs of the patient and showed these values in their work.

There was a system for managing the needs of patients living with dementia or learning disabilities. Staff described how they made reasonable adjustments, including enabling patients to be accompanied by a carer or family member if needed. If patients could not remain still for the length of time to complete the scan, they would be referred to other PET-CT centres where other supportive treatment was available, for example total intravenous anaesthesia.

The provider and the service acted to meet the requirements of the Accessible Information Standard. The Accessible Information Standard applies to patients (and where appropriate carers and parents) who have information or communication needs relating to a disability, impairment or sensory loss. It requires providers of care and treatment to NHS patients to provide information patients can understand and communication support they need. Staff said they could access British sign language interpreters for patients who had a hearing impairment. A hearing loop was available for hearing-impaired patients. Staff told us that information leaflets could be provided in large print for patients with visual difficulties.

Patients were reassured that a member of the team would always be watching the scan from the control room. If the patient had any concerns during the procedure, they could communicate to each other through a two-way microphone.

## Access and flow

**People could access the service when they needed it and received the right care promptly. Waiting times from referral to treatment and arrangements to admit, treat and discharge patients were in line with national standards.**

The service offered patients appointments within three to five days of referral, which met the national cancer pathway and their contractual obligations. This resulted in a waiting list of rarely more than two days. Staff followed processes to ensure patients who were due to be discussed in multidisciplinary meetings had their scans carried out, so results were available for the meeting. Staff followed processes to ensure that patients needing PET-CT imaging in the future had their scans booked onto the system and received their appointments.

The service had a target from NHS England of patients having their scan and their results reported and sent to the referring consultant within seven working days of the referral being received. Audit records showed from 1 September 2018 to 30 September 2019 they had achieved a 93% target.

Occasionally the radioactive medicine was not available due to a failure in meeting strict quality controls during manufacture or there were delays in the quality assurance process of the radioactive medicine. This resulted in delays and rescheduling of patient scans. From 1 September 2018 to 30 September 2019 the service carried out 2,665 scans. During that period there were 19 scans delayed due to delays in the receipt of the radioactive medicines and five scans delayed due to equipment failure. When this occurred, staff apologised to patients and gave patients an alternative date for their scan. This could be at the Southampton PET-CT Centre or at another one of the providers PET-CT centres depending on the patient's wishes.

## Learning from complaints and concerns

**It was easy for people to give feedback and raise concerns about care received. The service treated concerns and complaints seriously, investigated them and shared lessons learned with all staff.**

There were leaflets displayed in the patient waiting area to guide patients on how to provide feedback about the service.



# Diagnostic imaging

There was an organisational complaints policy which reflected national guidance. Records showed

complaints handling and conflict resolution was included within the staff mandatory training. Staff told us they had received training in handling complaints and could describe the process.

From 1 September 2018 to 30 October 2019 the service received seven formal complaints. The complaints were managed under the formal complaints process. Six were upheld and one was partially upheld.

Learning from complaints in other locations was shared across the organisation using emailed minutes of meetings and bulletins. For example, complaints had been made about scans cancelled on the day of the scan. The provider had changed their communication and ensured patients understood that scans might be cancelled on the day due to failed radioactive medicines. The information was supported by a patient leaflet entitled 'A guide to the production of your individual injection of PET-CT'. Staff sent the leaflet out with patient appointments and gave guidance as to the complexity of the production of radioactive medicine, the areas where it could fail, and therefore potentially be unsafe for patient use.

## Are diagnostic imaging services well-led?

Good 

### Leadership

**Leaders had the integrity, skills and abilities to run the service. They understood and managed the priorities and issues the service faced. They were visible and approachable in the service for patients and staff.**

There was a clearly defined and visible leadership for the service. There was a unit manager who also managed the provider's other local PET-CT service. Their time was divided equally between both services. The service had a whole-time clinical lead PET technologist, who supported the manager with clinical leadership of the service.

Discussions with the manager showed they ran the service focused on the needs of the patients and quality of the service whilst supporting staff.

Service staff understood the reporting structure and told us they were supported by their managers.

The manager told us they felt supported by other unit managers and the senior leadership of the organisation, and that they were approachable and easily contactable.

### Vision and strategy

**The service had a vision for what it wanted to achieve and a strategy to turn it into action, developed with all relevant stakeholders. The vision and strategy were focused on sustainability of services and aligned to local plans within the wider health economy.**

Staff could describe the organisational values of openness, collaboration, excellence, learning and efficiency and told us it was at the heart of all they did.

Staff appraisal was measured against the organisational values and action taken if their standard of work did not meet these values.

The vision and strategy of the organisation was displayed on the website and within the service for staff, patients and visitors to see.

### Culture

**Staff felt respected, supported and valued. They were focused on the needs of patients receiving care. The service promoted equality and diversity in daily work and provided opportunities for career development. The service had an open culture where patients, their families and staff could raise concerns without fear.**

The service focussed on the provision of person-centred care. The registered manager promoted a sense of common purpose based on the service values.

The registered manager encouraged collaboration, through their leadership and support. Staff told us they felt empowered to suggest new ideas and were encouraged to have ownership of the service.

The service promoted a culture of openness and honesty. Staff we spoke with told us they felt confident in escalating concerns and issues to managers in the service.

# Diagnostic imaging

Staff we spoke with were aware of their roles and responsibilities in relation to duty of candour. There had been no incidents which met the requirements for application of duty of candour in the 12 months prior to our inspection.

All staff we spoke with were passionate about the service and felt proud to be working for the company.

There was a positive attitude between staff. It was clear that staff supported each other, and staff reported great collaborative team working.

## Governance

**Leaders operated effective governance processes, throughout the service and with partner organisations. Staff at all levels were clear about their roles and accountabilities and had regular opportunities to meet, discuss and learn from the performance of the service.**

Alliance Medical Limited operated a comprehensive clinical governance framework and we saw that clear governance processes were used within the service. The registered manager had oversight of the running of the service.

Local governance processes were achieved through three monthly meetings with trust staff from the radiology department to discuss the service provided; local team meetings and local analysis of performance, with discussion of local incidents. The service aimed to have monthly team meetings. However, on occasions these had to be postponed due to staffing or patient care needs. The manager ensured necessary information was shared with staff if meetings were cancelled, through email or one to one meetings. Records of team meetings showed these meetings included business updates such as compliance, quality and risks, as well as a review of mandatory training compliance.

The service had organisational policies and site specific procedures and processes. We reviewed a sample of policies, such as the risk assessment policy and procedure, risk management strategy and organisational policy and the quality management framework policy.

Staff were clear about their roles and understood what they were accountable for. All clinical staff were professionally accountable for the service and care that was delivered within the unit.

## Managing risks, issues and performance

**The service used systems to manage performance effectively. They identified and escalated relevant risks and issues and identified actions to reduce their impact. They had plans to cope with unexpected events. Staff contributed to decision-making to help avoid financial pressures compromising the quality of care.**

To manage risks in the delivery of the service, staff had completed risk assessments about specific areas. This included risks relating to maintaining security in the service, ionising radiation hazards and risk to staff of sharps injuries. Risk assessments detailed the action taken to lessen the risk and included a date for review of the risk, ensuring the risks were kept under review. There was an organisational wide risk assessment detailing actions and controls for the failure of supply of radioactive medicines that had been agreed by the commissioner, NHS England.

A review of the provider's governance meetings confirmed performance was monitored, locally regionally and nationally.

The provider had a business continuity plan, detailing actions that needed to be taken both at a provider level and at a service level, if the business was interrupted. The registered manager and staff had a good understanding about the actions they needed to take. For example: resourcing more staff in case of unexpected staff shortages and the use of alternative Alliance Medical Limited PET-CT centres in case of equipment failure.

There was an audit in February 2019 to review compliance with Radioactive Substances Advisory Committee and Ionising Radiation (Medical Exposure) Regulations, 27 actions and recommendations were made. Of these 15 actions had been completed, six actions were underway, four were awaiting support from the provider and two were recommendations without an update.

## Managing information

# Diagnostic imaging

**The service collected reliable data and analysed it. Staff could find the data they needed, in easily accessible formats, to understand performance, make decisions and improvements. The information systems were integrated and secure. Data or notifications were consistently submitted to external organisations as required.**

Staff understood the requirements of managing a patient's personal information in accordance with relevant legislation and regulations. General Data Protection Regulations (GDPR) had been reviewed to ensure the service was working within regulations. All staff had completed training about information governance and data protection.

Staff held patient data on electronic records. Access to the electronic records were password protected. Staff transferred any paper documents onto electronic files, paper copies were kept in locked storage until their destruction after 30 days.

Staff had access to provider policies and resource material through the internal computer system and a site file. Staff could find and access relevant and key records, this enabled them to carry out their day to day roles. The unit manager directed us to the regulations, radiation risks, and use of radiation documents stored on the intranet.

There were systems and processes in place to support security of information including patient records and where information was transferred between the service and the host NHS hospital and other referrers, for example referrals and reports.

Discussion with the manager showed they understood what data notifications needed to be sent to external bodies, including those that needed to be submitted to CQC.

## Engagement

**Leaders and staff actively and openly engaged with patients and staff to plan and manage services. They collaborated with partner organisations to help improve services for patients.**

Public engagement was mainly through interactions at the service and through feedback from the patient satisfaction survey. The manager and clinical lead reviewed the patient satisfaction survey results monthly and used the information for reflection about the service and to implement changes. The registered manager also followed up referrers and patients that had had complications during the usual pathway. This was to see if patients' experiences had been good, and to find out if the unit could have done somethings better.

Staff were updated on changes and events within the organisation through team meetings. Lessons learned across the organisation were shared at this meeting.

Staff engagement was measured through an annual employee survey which was conducted by an independent organisation to ensure confidentiality. In response to the survey, action plans were developed and progress against the plans was measured on a regular basis.

## Learning, continuous improvement and innovation

**All staff were committed to continually learning and improving services.**

The registered manager described an improvement that had been made to the service to meet the needs of patients using the service. The service had received feedback that the uptake patient trolleys were uncomfortable, where patients waited one hour for the radioactive medicines to be absorbed by the body. The registered manager told us new reclining chairs were being procured.

# Outstanding practice and areas for improvement

## Areas for improvement

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

- The provider should ensure environmental radiation detection monitors and personal radiation detection monitors are calibrated as soon as possible.