# JOB DESCRIPTION

## 1. JOB IDENTIFICATION

<table>
<thead>
<tr>
<th>Job Title:</th>
<th>Radiographer (CT Rotational)</th>
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<tr>
<td>Responsible to:</td>
<td>Radiology Services Manager</td>
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<tr>
<td>Department(s):</td>
<td>Medical Imaging</td>
</tr>
<tr>
<td>Directorate:</td>
<td>Clinical Services, Gilbert Bain Hospital</td>
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<tr>
<td>Last Update:</td>
<td>November 2018</td>
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## 2. JOB PURPOSE

As an experienced practitioner, the post holder will rotate between general, mobile, theatres, fluoroscopy, and in particular CT, providing a high quality, efficient, patient focussed imaging service to NHS Shetland.

You will be expected to spend as much time as practical in your specialist area to maintain your competency. You will manage, organise and supervise the CT work lists as part of a specialist team. This involves:

1. Undertaking intravenous administration of contrast agents without supervision.
2. Providing professional and clinical support and training to the radiographers rotating through CT.
3. Reporting to the Head of Service on monitoring the efficiency and effectiveness of the CT service.
4. Leading the development of CT imaging throughout the department, ensuring best clinical practice in a remote and rural general hospital.
5. Undertaking all radiographic duties, including general radiography and on-call service, as required, with a flexible approach as commensurate with current clinical skills.
6. Being a remote and rural practice, with no on-site radiologist, the post holder must have extremely high film analysis skills and a very sound knowledge of pathology and anatomy to allow autonomous referral to other departments ensuring correct patient management.
7. The post holder is responsible for assessing justifying and imaging his/her own specialist workload and maintaining associated records, in accordance with IR (ME) R 2000.
8. The post holder will directly supervise and train recently qualified radiographers, assistant practitioners, and undergraduate radiographers, other AHP’s, nurses and dental nurses
3. ORGANISATIONAL POSITION

Department Structure

Head of Service

Reporting Radiographer
Band 7

Clinical Specialist Ultrasonographer
Band 7

CT Specialist Radiographers
Band 6

Radiographers
Band 5

Assistant Practitioner
Band 4
4. DIMENSIONS (Job Facts and Figures)/ROLE OF DEPARTMENT

To provide responsive, timely & highest quality imaging services to:

- Total population of Shetland: Approximately 22,000
- One Health Board (Shetland NHS Board)
- One Hospital – Gilbert Bain
- 10 General Practices
- One Local Authority (Shetland Islands Council)

The department undertakes approximately 12,000 imaging examinations per year. There is no Consultant Radiologist and Radiologists at NHS Grampian, Aberdeen Royal Infirmary carry out reporting, where the Clinical Director is also based. Consultant Radiologists visit the department once a month to carry out specialised examinations. Role extension is actively encouraged within the department.

5. KEY RESULT AREAS

Maintaining a high standard of radiographic expertise in all fields of radiography but in particular the highly specialist field of cross sectional CT imaging, to afford a high standard of clinical supervision and demonstrate exemplary clinical practice across a broad range of radiological procedures

The post holder will have/demonstrate a willingness to undertake postgraduate study in the specialist modality of CT, relevant to departmental skill mix review and service need.

The post holder will preferably have, or at least be willing to undertake, accredited training to competently cannulate and administer IV contrast

Having highly specialist imaging knowledge across a broad range of highly complex and sometimes infrequent diagnostic radiographic procedures and situations as expected of specialist in general diagnostic radiography in a remote and rural practice.

Practice according to department standard operating procedures and constantly review the clinical effectiveness of those procedures by updating them in line with, and by interpretation of, latest professional trends and developments in evidence based practice to ensure best clinical practice standards locally and compliance with clinical governance principles

Maintaining a personal development portfolio (in line with HPC requirements), professional training, education and participation in own performance appraisal.

Participation in national and local research, audit projects and clinical trials implementing changes as a result of published results

Identifying own personal development needs, and those of others,
Participating in own appraisal process in an agreed timeframe.

Undertaking appraisals of junior staff as delegated by the Head of Service

Developing own skills in mentoring, training and supervision of junior staff to facilitate the development of radiographer extended role initiatives and the practical training and educational support of junior staff, the development of the radiographer helper/assistant programme and the training of student radiographers.

The post holder is required to participate in clinical governance, clinical effectiveness and audit.

Advising on selection of appropriate contrast agent, drawing up contrast media and other drugs, as required, safely and follow correct disposal procedures e.g. sharps.

Prepare and mix barium suspensions for swallows/meals/enemas and dispose of used mixtures as per department protocol.

Preparation of trolleys for sterile procedures within the department, e.g. temporary pacing, biopsies, cystograms, sialograms and all other invasive procedures.

The post holder is required to work as a specialised, autonomous practitioner, undertaking a varied and often complex clinical caseload to a highly professional standard of expertise using specialist knowledge from theoretical and practical experience. This involves:

a) Working independently, being accountable for own professional actions, accepting clinical responsibility for a designated caseload of patients, and to organise this efficiently and effectively with regard to clinical priorities and use of time and resources, given the unpredictable workload.

b) Multi-disciplinary work with other, primarily health, professionals e.g. physiotherapists, podiatrists, nurses, primary and secondary care doctors, to ensure that the patient/service user receives the most appropriate examination, treatment and support.

c) Responsibility for the authorisation of referrals and the practical direct supervision of less experienced radiographers and Assistant Practitioners as well as students within the department, taking responsibility for the quality of the images they produce and the care of their patients.

d) Advising junior colleagues and deciding whether an x-ray request is justified and the correct examination has been requested to diagnose that patient’s condition, and obtaining the patients informed consent to undertake the required radiographic examination, in some instances this includes cannulation and the selection and administering of contrast agents.

e) Identifying patients whose needs fall outside scope of own expertise making appropriate referral to other practitioners with the necessary degree of urgency.

f) Assess patient’s ability to undergo examination regarding their health and well-being and adapt procedure as appropriate

g) Involving patients/service users in shared decision making, giving clear explanations as
to the role and scope of the medical imaging service, respecting their dignity, wishes and beliefs and encouraging them to use their own skills to contribute, in partnership to their own health and well being.

h) Provide specialist advice, opinions and judgements on the resultant images where applicable – particularly on patients referred from accident and emergency to assist in the ongoing care of the patient

i) Applying a high level of manual dexterity in acquiring accurate, high quality diagnostic images, whilst accommodating a full range of patient presentations and behaviours and adapting standard techniques when necessary.

j) Supporting and monitoring patients throughout procedures, by observation, and encouraging them to promote their own health and well being, minimising unnecessary discomfort and maintaining dignity.

k) To be responsible for the care, comfort and clinical well being of the patient, whilst in the imaging department. This includes the monitoring or administration of oxygen under supervision, reacting appropriately in an emergency situation e.g. cardiac arrest, anaphylactic reaction to contrast media etc.

l) Provide information to patients and all relevant bodies concerning the risks involved with ionising radiation.

m) Seeking to reduce the overall radiation dose to the community by e.g. participation in national, regional and local dose surveys; improvement/adaptation of radiographic techniques

n) Participate in any department visits from local authority education parties or as part of a mobile education team to promote health and well being issues concerning the function of the Imaging department and its role in the organisation of the NHS

6a. EQUIPMENT AND MACHINERY

Induction Training will be provided to enable competency in the use of all the x-ray equipment within the scope of practice and entitlement of the post. In addition the post holder is responsible for:

Promoting monitoring and maintaining best practice in health, safety and security within the Medical Imaging Department work areas, which includes wards and theatres or wherever mobile imaging is carried out, including:

Maintaining a safe working environment for self, colleagues and others (including students on placement) e.g. by implementing organisational policies and procedures which promote and maintain health, safety and security, identifying and reporting hazards and assisting with the implementation of appropriate control measures to manage risk. In particular:

i) To assist the Radiation Protection Supervisor and be aware of, and comply with systems of work, local rules, policies and procedures in accordance with current ionising radiation regulations to ensure the safety of themselves,
patients and members of the public.

ii) To wear a radiation-monitoring device at all times and ensure the radiation safety of others.

iii) To be aware of the risks associated with this role and comply with the control measures in any relevant Risk Assessments. To report and act upon any incidents of working practice, which may have detrimental effects upon staff members.

iv) Responsibility for the safe operation of all expensive imaging/computerised and manual processing equipment. To monitor equipment performance, fittings or fabric of the department and follow identified lines of reporting and documentation, taking appropriate action where necessary.

v) Ensure that Quality Assurance equipment tests are undertaken and any equipment faults reported.

vi) Responsibility for the cleanliness and superficial maintenance of complex and expensive radiographic equipment and accessories within the work area and ensure compliance with infection control procedures within the clinical area.

- Ensuring that regulations covered by the Data Protection Act and departmental policies regarding patients' records are observed.
- Ensuring that appropriate staff are made aware of self and colleagues whereabouts during working hours.
- Taking appropriate action to manage emergencies, summoning assistance immediately when this is necessary.

Undertaking all mandatory training required for the role, including regular updates in Fire, Moving & Handling and CPR, as required by Clinical Radiology and Health Board Health and Safety Policies, including COSHH regulations, and assist in ensuring all work activities are compliant.

The post holder must be fully conversant with and responsible for the safe operating use of equipment and machinery within the clinical and technical environment used to acquire diagnostic images, including data recording and quality assurance testing. This involves:

a) Responsible for the timely undertaking of highly specialised and accurate quality assurance testing of expensive medical imaging equipment and reporting any faults.

b) Planning, delivering training and delegating testing to ensure equipment and resources are available and safe to provide a 24-hour imaging service.

c) In consultation with the Radiation Protection Advisory Service, the National Radiation Protection Board, and equipment manufacturers, ensure equipment settings and dose rates remain within acceptable limits. Recording and monitoring QA test results and alerting the head of department and the manufacturer of any faults and planning the rectification consistent to the degree of urgency.

d) To provide guidance to external users regarding the deployment of radiographic resources e.g. Theatre and mobile equipment usage and safety.
e) To participate in and advise on the safe transfer and manipulation of patients and equipment within the department and hospital, using manual handling guidelines and risk assessments.

f) Ensure all junior staff, students, locums are aware of and adhere to correct movement and disposal of household, clinical and confidential waste according to local policies and procedures.

g) Maintaining, quality assuring and cleaning current accessory equipment, e.g. positioning aids, lead aprons, moving and handling equipment, and storing it safely after use. Advising on new products available and evaluating them and their effectiveness in meeting identified needs.

Controlling and storing goods according to manufacturers and user requirements e.g. drugs, radiographic film mobile imaging equipment etc. reviewing safe storage procedures regularly.

Checking received goods against orders, signing for goods received and keeping appropriate records, correctly identifying any errors and taking appropriate action in response.

Advising on new imaging accessory equipment products available and evaluating them and their effectiveness in meeting identified needs.

Train new or junior staff in the use of medical imaging equipment and accessories supporting safe and effective use.

### 6b. SYSTEMS

The post holder must demonstrate proficiency in operating/using the Radiology information system and picture archive system requiring basic IT skills. As an experienced practitioner, the post holder will be required to interpret and modify data. This involves:

<table>
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<tr>
<th>a)</th>
<th>Input of patient details into radiology management system and PACs – amending and modifying data as necessary, accurately and completely according to department standard operating procedures.</th>
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<tr>
<td>b)</td>
<td>Accurately input and record radiation doses per examination</td>
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<td>c)</td>
<td>Find requested data using agreed procedures i.e. patient examination report status, attendance details, dose records, film usage, manage staff attendance records.</td>
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<td>d)</td>
<td>Respecting patient confidentiality at all times and not divulging patient information unless sanctioned by requirements of the role e.g. examination results, staff time sheets etc.,</td>
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<td>e)</td>
<td>Ensure that the confidentiality of all information gained in the course of undertaking the role is safeguarded and maintained in accordance with professional, local and national guidelines and regulations e.g. Data protection act (1998).</td>
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7. ASSIGNMENT AND REVIEW OF WORK

As an experienced specialist CT and general radiographer, the post holder is required to work totally unsupervised, exercising judgement and initiative to prioritise and arrange own work and the work of those requiring supervision.

a) Supervise the radiographic work of the Assistant Practitioner, junior radiographer, students and locum staff.

b) Co-ordinate and delegate work to ensure clinical governance issues are addressed and that all staff rotate through all modalities regularly to maintain their skills.

c) Act as mentor and trainer to junior staff and students on placement.

d) Be involved in induction programmes for new staff within the department, and when appropriate, new ‘users’ of the department.

e) Be involved in the selection and recruitment process for the department, including the interviewing of potential candidates alongside the head of department.

f) Be responsible for the performance review of peer medical imaging department staff as delegated by the head of department.

g) As with a remote and rural practice, it is often necessary and expected for the post holder to assume the role of lead specialist practitioner, in the absence of more senior staff.

8. DECISIONS AND JUDGEMENTS

Modifying raw image data using various digital processing parameters to optimise image quality prior to transmitting the digital image to archive and viewing stations.

Analysing radiographic images for diagnostic quality and appropriate views to answer the clinical question.

Interpreting the resultant image to the level of your own ability and providing an opinion when necessary using the red dot system. Making reference to standard texts when necessary.

Undertake audit as part of the departmental quality, interpret results and report findings and identify trends or faults.

To recognise, advise and act upon radiographic abnormalities detected and those brought to you for advice, using the appropriate system of work.

Ensuring legislation, policies and procedures are applied correctly within the department and be involved in the revision, training and implementation of departmental and professional policies and procedures by proposing changes to practices and procedures, consulting appropriately where necessary and drafting procedures and protocols for consideration and adoption.
### 9. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB

<table>
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<tr>
<th>Part</th>
<th>Description</th>
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<tr>
<td>Exposure to findings/anomalies often with a poor prognosis – dealing with patients and their relatives who may become emotionally upset.</td>
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<td>Responding to questions from patients that are difficult to answer precisely whilst not being misleading.</td>
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<td>Working with no direct professional support or peer consultation.</td>
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<td>Balancing speed and accuracy against a background of a service in extreme demand, requiring intense concentration.</td>
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<td>Intimate examinations or information, such as pregnancy status, or forensic/medico legal examinations requiring consent.</td>
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<td>Challenging practices in order to maintain professional standards, make improvements and raise quality</td>
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<td>Meeting service delivery targets – waiting times</td>
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<td>Flexibility in delivering out of hours service by participation in on call rota.</td>
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### 10. COMMUNICATIONS AND RELATIONSHIPS

Working closely with a wide range of people, including patients/service users, relatives, carers, Medical and Surgical Consultants and their teams, other Allied health Professionals and the radiographic team, in particular:

- Liaise effectively, using a variety of media, with administrative, clerical, nursing and medical personnel, both internally and externally, including GP’s, to ensure service requirements are addressed
- To relate to and communicate with all patients/relatives in a sensitive and empathetic manner, often imparting and receiving information of a highly complex and often sensitive nature, ensuring understanding
- Assessing the need for and utilising appropriate levels of tact and persuasion as required
- Providing specialist advice, teaching, instruction and verbal diagnostic reports to patients/service users, relatives, carers, nursing staff, medical personnel and referrers, including other radiographers and professionals, to promote understanding of the aims of the medical imaging service and to ensure a consistent approach to patient care.
- Communicating safety issues with colleagues, managers, radiation safety advisers and x-ray equipment engineers via incident reporting, audit results, QA testing, fault reporting and non-compliance issues.
Understanding and overcoming barriers to effective communication on a daily basis This involves:

- Adapting methods to communicate effectively with patients of all ages, physical and mental abilities, needs, cultures, pain, fear, levels of consciousness, sensory loss, altered perception,
- Dealing with antisocial and/or threatening behaviour, by using communication skills of persuasion, motivation and explanation to overcome such barriers.
- To obtain and give information – often of a complex and sensitive nature – and give instructions in order to optimise the value of the patient examination, for example: Communicate diagnostic results to other appropriate professionals, advising GP’s, nurses and junior doctors in the absence of a radiologist.

Maintaining comprehensive and accurate assessment and examination records,

- Ensuring compliance with Ionising Radiation Regulations.
- Ensuring the confidentiality of all information gained in the course of undertaking the role is safeguarded and maintained in accordance with professional, local and national guidelines and regulations e.g. Data Protection Act (1998).

Liaising with other health professionals regarding implementation of service initiatives and changes for example:

- Open-access, one-stop clinics, screening programmes etc.
- Assisting the implementation of service change, using persuading, negotiating and reassuring skills to gain co-operation of staff involved.

Motivating members of the radiographic team to achieve objectives by establishing and maintaining effective communication on an individual and collective basis, presenting and discussing ideas, both formally and informally with individuals, groups and colleagues, ensuring issues are dealt with proactively and tactfully, reporting sensitive/contentious issues to the head of service.

Participating in meetings and discussion groups within and across department boundaries e.g. Partnership Forum, New Policy Working Groups, Clinical Governance meetings etc.

11. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB

- Intense concentration for prolonged periods as images are analysed, compared, and interpreted throughout the examination procedure, whilst maintaining patient rapport, explaining the process, answering questions simultaneously.
- Excellent hand-eye co-ordination and manual dexterity
- Well-developed pattern recognition and spatial acuity to detect subtle anomalies or abnormalities during image analysis and a logical and analytical approach to the presentation of these findings and their meaning.
- Working in isolation where speed and accuracy is required due to time pressures from varied and heavy workloads.
• Dealing with diverse age ranges and levels of understanding.
• Repetitive actions – sustained awkward positions, leading to common musculo-skeletal injuries.
• Working in dim light environment, using keyboard and VDU continuously.
• Movement of equipment and patients e.g use of hoist.
• Dealing with challenging behaviour / having difficult conversations

### 12. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB

Minimum required to undertake the role (person specification attached):

**Clinical experience:**
- Evidence of experience of working at an unsupervised or indirectly supervised level in the modality of CT.
- Evidence of commitment to CPD and reflective practice as a mandatory requirement to ensure continued HPC registration

**Training**
- Diploma of the College of Radiographers or BSc Hons Radiography leading to HPC registration
- Post Grad certificate in CT or equivalent experience working in the modality.

**Management Skills**
- Evidence of experience of knowledge and understanding of managing people; collaborative and negotiating skills; partnership approach; group/team dynamics; information and knowledge management including health informatics; evidence of planning and organisational skills.

**Behavioural and Communication Skills**
- Advanced knowledge and understanding of psychological, sociological and cultural factors and their relevance and impact upon the management and care of patients undergoing imaging/interventional procedures in general and within specialist area of clinical practice. This includes the dynamics of health, illness and healthcare.
- Knowledge of principles and concepts relating to communication and teamwork.

**Applications and Techniques**
- Evidence of advanced knowledge and understanding of the principles and concepts underpinning the broad range of applications used for general radiography and in particular CT.
- This knowledge must be supplemented by a highly specialised and detailed knowledge and understanding of the principles of imaging within the specialist field of CT.
- Up to date knowledge of current trends and developments in applications and techniques used within diagnostic imaging in general and within CT.
- Understanding of new technology in CT contrast agents and the techniques involved in their use.
- Contribute to the generation of new theoretical and practical knowledge within CT.
Legislative, policy, ethical and research dimensions

- Must have evidence of advanced knowledge and understanding of the legislative, policy, ethical and research frameworks that underpin, inform and influence diagnostic imaging in general, and within the specialist area of clinical practice and management – in particular IR(ME)R 2000 and IRR 99 legislation and local policies and procedures.
- Awareness of developments and trends in legislation and health and social care policy, with a focus on issues of particular reference to diagnostic imaging.
- Knowledge of the quality assurance processes and systems in place and their relationship to current legislation and health policy.
- Knowledge of the research process, research methodologies and the principles of audit.
- Knowledge of requirements in relation to role and the Data Protection Act and local policies and procedures regarding security and confidentiality.

Clinical Sciences

- Advanced knowledge of risk – benefit philosophy applied to CT exposure and medical ionising radiation exposures; the scientific basis for imaging and interventional procedures; pharmacology of drugs commonly encountered within radiology; principles of moving and handling; principles of emergency care; principles underpinning assessment and monitoring and care of patient before, during and after imaging/interventional procedures; principles of infection control.

Technology

- Advanced knowledge and understanding of the capability, applications and range of technological/computerised equipment used within CT clinical practice. This requires a thorough understanding of the principles of safe and correct operation of equipment and the appropriate application, to ensure diagnostic images produced contribute to the effective clinical management of patients.
- Current knowledge of development and trends in technology and applications within the field of CT.

Biological Sciences

- Advanced knowledge and understanding of human anatomy and physiology, including common variants, and its development from the foetus to old age, with an emphasis on its demonstration on diagnostic images, but in particular the relevance to the clinical practice of CT scanning. This requires knowledge of common mechanisms of injury and disease, resulting trauma and their resultant imaging appearances, with further advanced knowledge relevant to the specialist field of CT clinical practice.
- Ability to contribute to the generation of new theoretical and practical knowledge within the field of CT.

Physical Sciences

- Advanced knowledge and understanding of the physical principles of CT production, interaction with human tissues, modification and protection.
- Knowledge of CT dosimetry and CT dose minimisation as applied to medical CT imaging.
## 14. JOB DESCRIPTION AGREEMENT

A separate job description will need to be signed off by each jobholder to whom the job description applies.

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<tr>
<th>Job Holder's Signature:</th>
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<td>Head of Department Signature:</td>
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