

## JOB DESCRIPTION

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|---|---|
| <b>Job Title:</b>   | Deputy Head of Brachytherapy Physics  |
| <b>Band</b>   | 8A  |
| <b>Care Group</b>   | Women's, Children's, Cancer and Support Services Care Group   |
| <b>Directorate:</b>   | Cancer Care   |
| <b>Department:</b>  | Radiotherapy Physics  |
| <b>Location:</b>  | Poole Hospital  |
| <b>Accountable to:</b>  | Head of Brachytherapy Physics   |
| <b>Accountable for:</b>   | No direct reports   |
| <b>Main Purpose</b>   | <p>To carry out highly specialist work in the area of brachytherapy physics and to support &amp; deputise for the head of brachytherapy physics.</p> <p>To act as MPE (Medical Physics Expert) in the area of brachytherapy and provide expert physics advice to staff including all radiotherapy staff as well as ward and theatre staff.</p> <p>As relevant to the postholders experience, act as MPE in other areas of the department.</p> |
| <b>General Duties</b>   |   |
| <p><u>Brachytherapy equipment and software:</u></p> <ul style="list-style-type: none"> <li>- Contribute to the procurement of new equipment; providing expert advice on clinical, scientific, operational and radiation safety aspects</li> <li>- Commission new and upgraded equipment; providing appropriate reports and signing off for clinical use</li> <li>- Complete routine tasks within the QA program covering all brachytherapy equipment, providing expert advice on updating these tasks and actions following out of tolerance results</li> <li>- Be an Information Asset Administrator for brachytherapy software and databases</li> <li>- Follow processes to ensure timely completion of all radioactive source documentation and processes</li> </ul> <p><u>Dosimetry &amp; QA</u></p> <ul style="list-style-type: none"> <li>- Participate in the late shift rota to undertake some routine machine QA tasks</li> <li>- Participate in the weekend on-call / QA rota</li> </ul> <p><u>HR/Training</u></p> <ul style="list-style-type: none"> <li>- train and support staff within the department and wider oncology directorate.</li> <li>- provide comprehensive training to a wide group of staff to support the brachytherapy service.</li> </ul> |   |

### QMS, governance, security and legislation

- review and update Quality System documentation relevant to the Brachytherapy physics service
- participate in the on-going schedule of audit to find and resolve areas of non-compliance and support changes in the service.
- Act as a Radiation Protection Supervisor (RPS) for brachytherapy.
- Act as an out-of-hours adviser for radiation incidents following brachytherapy treatments and source security
- Maintain documentation according to the department's quality system ISO 9001:2015
- Act as an Operator as defined by the Ionising Radiation Medical Exposure Regulations (IRMER 2017)
- Work in accordance with the departmental Local Rules under IRR17

### General

- Plan and organise routine work for yourself and other staff, adjusting plans to cope with changing priorities (e.g. staff off sick, machine breakdowns)
- Freedom to act at Medical Physics Expert level, using experience, judgement and knowledge of literature, legislation and Trust policy, in situations which are not covered by Trust procedures or protocols

### **Communication and Working Relationship Skills**

Provide highly complex scientific and technical advice to Radiotherapy Consultants and other clinical staff regarding patient treatment for brachytherapy, external beam radiotherapy and QA and dosimetry.

Present specialist scientific information at conferences.

As an appointed MPE, the postholder will be required to receive and interpret highly complex and potentially conflicting information. This may be regarding radiotherapy treatments, quality assurance results, incidents etc. They will be required to communicate clear following actions with the Head of Brachytherapy Physics and Head of Radiotherapy Physics.

### **Analytical and Judgemental Skills**

A key function of the postholder as a Medical Physics Expert is to provide expert advice and exercise judgement on a wide range of matters relating to radiation safety, radiotherapy/brachytherapy treatment quality (including imaging) and legislative compliance based on knowledge and experience. As such, the postholder has the freedom to act independently and determine actions required by others in a wide range of situations.

For example, the postholder is required to:

- Analyse and update the workflow of brachytherapy processes, using judgement to balance the need for efficient and swift clinical procedures with the requirement for safety
- Use expertise to resolve faults and issues, using judgement to decide what checks must be carried out before radiotherapy equipment is signed back into clinical use
- Provide independent advice to management on legislative compliance and design, and use and development of radiation services and facilities
- Assess risk and determine and recommend actions to be taken, following radiation incident investigations, documenting the recommended report to statutory authorities where applicable
- Contribute to design and planning and determine the protection requirements for new healthcare radiation facilities to ensure safety of staff and patients. Assess risks to hospital staff and patients and judge whether practices in hospital departments relating to radiation use and safety are acceptable on

an on-going basis, and make recommendations for optimisation as appropriate.

- Assess and judge the technological and safety aspects of radiation emitting equipment during specification and procurement and report accordingly
- Use highly specialised computer systems to plan & check patient treatment plans; involving making and communicating decisions on highly complex plans
  - o Advise radiographers on complex set up issues and diode results
  - o Carry out regular QA & analysis of results on treatment planning systems

### **Planning and Organisational Skills**

Assist the Head of Brachytherapy Physics in managing and co-ordinating the routine and development Radiotherapy Physics work in the area of brachytherapy:

- Liaise with HDR supplier to organise source exchange/servicing on the HDR unit including admin and source return procedures
- Liaise with LDR brachytherapy supplier to organise seed returns for the I125 service
- Organise the brachytherapy planning/checking rota and ensure service cover by staff with relevant competencies, adjusting as necessary to reflect changes in staffing, leave, competence and service changes.
- supervise development projects within the brachytherapy section

### **Responsibility for Patient/Client Care, Treatment and Therapy**

Work unsupervised with freedom to act at Medical Physics Expert level in all aspects of brachytherapy physics, including clinical sessions, radiation protection, QA, calibration, source security.

- Take the lead physicist role during clinical brachytherapy procedures in theatre. This involves :
  - o Communicating with clinicians on highly complex procedure and planning of patient treatment within theatre
  - o Taking responsibility for security and radiation safety of sealed sources
  - o Presenting complex information on radiation protection to staff
  - o Advising dosimetrists on planning
  - o Analysis and resolution of complex problems, using judgement to choose the appropriate course from a range of options e.g. whether to proceed with treatment when equipment has an intermittent fault
- Use highly specialised computer systems to carry out complex patient treatment planning & checking on all brachytherapy treatments, live or offline
- Commission highly specialised computer planning systems as directed by the head of brachytherapy physics
- Provide occasional clinical support, with occasional direct patient contact during treatment procedures.
- Carry out the full range of brachytherapy QA tasks & analysis including source exchange QA.
- Develop new treatments as part of a multidisciplinary team as directed by the head of brachytherapy physics and clinicians

### **Responsibility for Policy / Service Development**

- For the brachytherapy service, develop, implement and enforce policies, procedures, work instructions and staff competencies within the Quality System to reflect changes in legislation, professional guidelines, clinical practice, and technology.
- Account for impact on other areas (Radiotherapy, Chemotherapy, Oncology wards etc) when proposing changes to policy or service.
- Follow process for change management

## **Responsibility for Finance, Equipment and Other Resources**

- The postholder is responsible for the safe use of brachytherapy equipment by themselves and other staff whose training they have overseen and signed off as competent.
- The postholder will coordinate the installation, maintenance, repair, upgrade and removal of equipment and software, liaising with IT, estates, procurement and clinical staff as necessary.
- Contribute to discussions regarding the most cost-effective solutions and developments needed to meet required goals.

## **Responsibility for Human Resources, e.g. Supervision, Training, HR Advice and Management**

Be responsible for the supervision and training of junior staff, STP trainees and SPRs in brachytherapy processes and radiation protection

## **Responsibility for Information Resources and Administrative Duties**

- Keep careful records of all work performed and complete other appropriate records
- Act as an Information Asset Administrator for brachytherapy software and databases

## **Responsibility for Research and Development**

- Participate in Research and Development projects and clinical audit.
- Take part in work for clinical trials
- Present original scientific and other work at meetings and conferences, and in publication as appropriate.
- Test new brachytherapy equipment for evaluation and introduction into clinical use.
- Liaise with radiotherapy engineers to design and adapt equipment to improve safety, equipment testing and staff training in the brachytherapy service

## **Freedom to Act**

- As the Head of Brachytherapy Physics and appointed Radiotherapy Medical Physics Expert (MPE), the post-holder has complete freedom to act within areas of their particular expertise and competence, using technical and clinical experience to resolve problems and advise on the best course of action.
- The post-holder can take action based on his/her own interpretation of clinical, professional, technical and scientific policies, advising the Department/Oncology Directorate as necessary on how these should be interpreted.
- Advise and sign off concessions as appropriate when deviating from the Quality System processes

## **Mental, Physical, and Emotional Effort**

### Mental effort

- Frequent requirement for prolonged concentration: producing highly complex patient treatment plans, detailed checking of data or treatment plans for errors, under time pressure (brachytherapy theatre, planning deadlines to meet patient start dates).
- The postholder will be subject to periods of intense concentration, e.g. checking software systems after upgrades to ensure the system can return to clinical use.

### Physical effort

- Requirement to use a Visual Display Unit more or less continuously on most days
- Frequent requirement to stand for long periods of time (e.g. brachy theatre) and an occasional requirement to lift or move heavy objects (dosimetry phantoms, lead shielding, plotting tanks etc).

### Emotional effort

- On rare occasions, technical or procedural failures, or stressful and pressured environments can lead to staff and/or patients behaving in a way likely to be highly distressing.

### Working conditions

- Frequently work in theatre sessions under difficult and unpleasant conditions during clinical brachytherapy procedures. This will involve handling radioactive sources and bodily fluids.
- The postholder is frequently exposed to the hazards posed by ionising radiation, lasers and high-voltage equipment
- Requirement to monitor and appropriately handle radioactive materials

## **Any Other Specific Tasks Required**

### Physical skills

- The postholder will regularly be required to position radiation equipment measuring devices with a high degree of precision and accuracy
- There is a requirement for speed and accuracy; for example using the low dose rate seed loader to produce custom source trains

### Flexible working and location

- Work scheduled late shifts and weekends to facilitate software upgrades, commissioning, QA etc, and work flexibly to support the brachytherapy service
- Participate in the morning run-up of the linear accelerators when required
- Participate in the weekend/bank holiday on-call rota for emergency Radiotherapy treatments.
- Work across radiotherapy sites (Poole and Dorchester) as required.

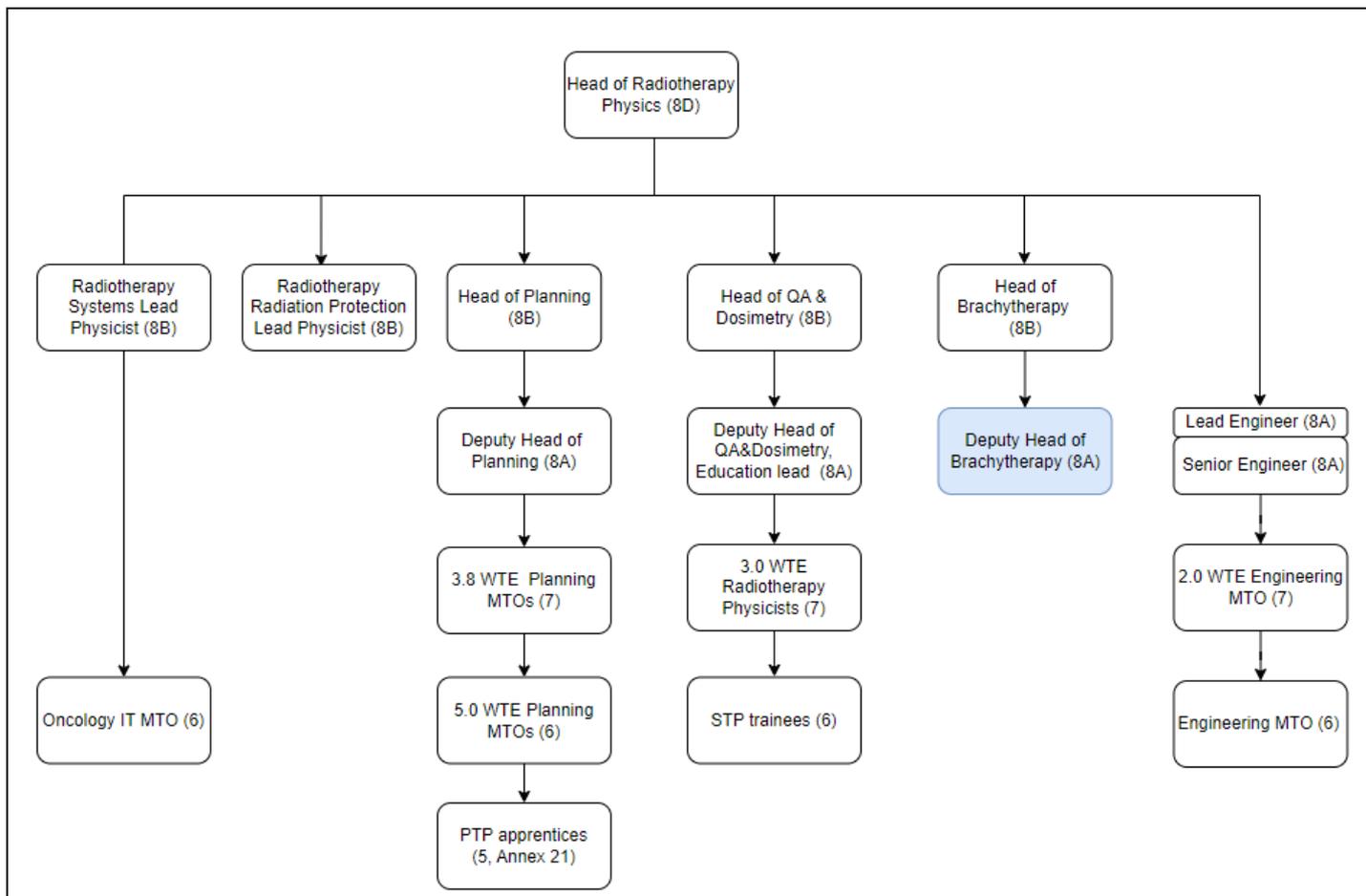
### Professional

- Maintain state registration with the Health and Care Professions Council (HCPC) and participate in the IPEM or other approved Continuing Professional Development (CPD) scheme.
- Maintain accreditation as a Medical Physics Expert.
- Keep abreast of the latest technical and scientific developments and new practices relating to Clinical Oncology and Radiotherapy Physics.
- Attend suitable seminars and courses as part of training and personal development and to further the work of the Department.

### Other

- Perform other duties related to the development of the Radiotherapy Physics service, appropriate to the post and grade, as agreed with the Head of Radiotherapy Physics.
- Deputise for the Head of Brachytherapy Physics as appropriate.

## **Organisational Structure of Department**



## **Transforming our Hospital Services in Dorset**

This is a very exciting time to join our hospitals in Dorset. We are in line to receive a significant national investment of £147 million to help transform our services and redevelop Poole Hospital and the Royal Bournemouth and Christchurch Hospitals, now merged as University Hospitals Dorset. We have been able to access these national funds because we have such a good plan in Dorset.

Our vision is to join up our services so they can be delivered in a more integrated way. We have a great opportunity together to improve outcomes for patients, make better use of all our resources, and ensure our services can be provided on a sustainable basis.

For developing our workforce, the aim is to establish modern, well-equipped centres of excellence with sustainable roles for staff, standardisation of education and training so that we can attract and retain skilled clinical and non-clinical staff to Dorset. This is a great opportunity for you to be part of the transformation as our two hospital trusts also merge.

## **CONDITIONS OF SERVICE**

As laid down by the University Hospitals Dorset NHS Foundation Trust.

### **Smoking**

The Trust has a responsibility to provide a safe and healthy environment for everyone who is working, visiting or living on hospital premises. Smoking is NOT allowed on site except for within the designated smoking areas and shelters for staff and patients.

The Trust will not tolerate smoking in undesignated areas and there is a zero tolerance approach to all staff who continue to do so. We will continue to provide support to staff, patients and visitors who want to give up smoking.

In the interests of promoting responsible healthcare all staff should refrain from smoking when off-site in uniform or wearing an identifying NHS badge in any public place.

### **Data Protection**

All staff are required to comply with the Data Protection Act and the Trust's Data Protection Policy. Staff are responsible for ensuring that any personal data which they hold is kept securely; that personal information is not disclosed either orally or in writing to any unauthorised third party; that personal data is only accessed where there is a legitimate business need and only where such processing is consistent with the purposes for which the data was collected.

### **Equality and Diversity**

The Trust is positively committed to the promotion and management of diversity and equality of opportunity. Equality and diversity is related to the actions and responsibilities of everyone – users of services including patients, clients and carers; work colleagues; employees; people in other organisations; the public in general.

All employees have a responsibility to ensure that they act in ways that support equality and value diversity and must comply with the responsibilities placed upon them by employment legislation and the equality duties.

### **Health and Safety at Work**

Everybody within the Trust has a legal responsibility for the health, safety and welfare of themselves and others at work. These duties are set out within the Health and Safety at Work etc. Act (HASAWA) 1974, the Management of Health and Safety at Work Regulations (MHSAWR) 1999, and in other relevant regulations and guidance notes.

#### ***All Staff***

In accordance with HASAWA and the Trust Health & Safety policy, all staff have legal responsibilities;

- to take reasonable care for themselves and others that may be affected by their acts/ omissions
- to co-operate with their manager/ supervisor to enable them to carry out their legal duties e.g.
  - shall report all hazards and defects to their line manager/ supervisor
  - shall report all accidents, incidents, near-miss events to their manager/ supervisor and via an adverse incident report (AIR) form (Trust policy)
- to use all work equipment, materials and substances in accordance with any training and instruction provided (e.g. medical devices, chemicals, mechanical aids, machinery, plants, vehicles, and personal protective equipment)
- to ensure they attend all annual mandatory training and attend health and safety training as required for the post.
- to comply with trust and department health, safety & risk policies and procedures
- not to interfere with or misuse anything provided to secure health and safety .e.g. wedge fire doors open, remove first aid equipment, break locks off systems

#### ***All Managers/ Heads of Department and Clinical Leaders***

In accordance with the Trust's Risk Assessment policy and Risk management strategy, all managers/heads of department and Clinical Leaders are responsible for ensuring that they and their staff, comply with all Trust and department health and safety policies and procedures.

### **Safeguarding**

The University Hospitals Dorset NHS Foundation Trust is fully committed to safeguarding the welfare of all children and young people, and vulnerable adults by taking all reasonable steps to protect them from harm. All staff will receive appropriate training and induction so that they understand their roles and responsibilities and are confident about carrying them out.

### **Infection prevention and control**

The prevention and appropriate management of infection is of paramount importance in the quality and safety of the care of patients, and to the safety of visitors and members of staff. It is the responsibility of all staff to be aware of, assess and minimise these risks and comply fully with Infection Prevention and Control Policies.

The Health Act 2008 establishes a Code of Practice for the Prevention and Control of Health Care Associated Infections. It sets out criteria by which NHS managers ensure that patients are cared for in a clean environment, with a safe water supply, where the risk of Healthcare Associated Infections (HCAI) is kept as low as possible.

**Managers, Heads of departments and Clinical Leaders** are responsible for ensuring that:

- The necessary equipment and mechanisms are in place to support infection prevention
- health care workers are free of and are protected from exposure to communicable infections during the course of their work, and that all staff are suitably educated in the prevention and control of HCAI

### **Carbon sustainability**

The Trust is committed to continual improvement in minimising the impact of its activities on the environment and expects all members of staff to play their part in achieving this goal and in particular to work towards a 28% reduction in carbon emissions by the end of 2020/21 (based on a 2013 baseline).

### **DBS/Disclosure and Barring Service (CRB)**

As part of our recruitment procedure this post will be subject to a Criminal Record Disclosure. A Disclosure is a document containing information held by the police and government departments. Disclosures provide details of a person's criminal record including convictions, cautions, reprimands and warnings held on the Police National Computer. Where the position involves working with children, Disclosures will also contain details from lists held by the Department of Health and Social Care and the Department for Education and Skills (DfE) of those considered unsuitable for this type of work.

**This post is subject to the policies, procedures and rules approved by the Trust and as varied from time to time. All staff are required to familiarise themselves with, and comply with the Trust's policies, procedures, rules or statements of practice. These can be accessed through the Intranet, your Department Manager, or through Human Resources.**

### **Job Description Agreement**

All job descriptions which are developed for job matching purposes must be signed by both the line manager and the staff member and the effective date of when the role changed entered. Please see re-grading and job evaluation policy.

Any job descriptions amended or updated through the results of a personal review should also be signed and dated by both the line manager and staff member and a copy retained on the personal file.

Signed..... Date.....Manager

Signed.....Date.....Employee

**Review of this Job Description**

This job description is intended as an outline indicator of general areas of activity and will be amended in the light of changing service needs. This job description will be reviewed in conjunction with the post holder on an annual basis at appraisal.