# PROFESSIONAL BOARD FOR RADIOGRAPHY AND CLINICAL TECHNOLOGY

# SCOPE OF PRACTICE: DIAGNOSTIC RADIOGRAPHY

## INTRODUCTION:

This document serves to guide the performance levels, limits and scope of practice for diagnostic radiographers registered with the Health Professions Council of South Africa (HPCSA), as regulated by the Professional Board for Radiography and Clinical Technology (PBRCT – herein after referred to as the Board). This document aims to guide professional, safe and effective diagnostic radiography practice and to protect members of the public against unsafe and unethical professional conduct.

## PURPOSE AND SCOPE OF THE DOCUMENT:

A scope of practice defines the procedures, actions and processes for which a professional has the knowledge, skills and expertise to practice safely and effectively in keeping with the terms of the governing bodies without posing any danger to the public or the practitioner.

The purpose of this document is thus to define the scope of practice to ensure the delivery of safe, high quality diagnostic radiography imaging services in both public and private health settings. The document, furthermore, describes the role of a diagnostic radiographer as a member of the healthcare team and provides a framework for the quality of improvement programs. As legislation and technology are ever evolving this document is dynamic in nature and will be amended when new legislation or technologies are introduced.

## QUALIFICATIONS FOR DIAGNOSTIC RADIOGRAPHERS:

Diagnostic radiographers must be deemed competent in the diagnostic procedures they perform through obtaining appropriate, accredited education, training and certification in their area/s of practice from a nationally recognised and accredited credentialing higher education institution.

A diagnostic radiographer may only perform diagnostic examinations after they have obtained a Board approved qualification and have registered such qualification with the HPCSA.

## PROFESSIONAL DUTIES OF A DIAGNOSTIC RADIOGRAPHER:

Diagnostic radiographers are highly skilled professionals who integrate patient history, supporting clinical data and imaging protocols with the radiographic examination to obtain quality diagnostic results. Diagnostic radiographers must demonstrate a high degree of accuracy in the production of images, use of diagnostic technology, evaluation and analysis of diagnostic images for medicolegal requirements and technical quality. Diagnostic radiographers, additionally, participate in interventional procedures as part of a team of healthcare professionals to produce quality images. They may, however, not cannulate or administer intravenous contrast media.

Diagnostic radiographers need to possess critical thinking, problem solving and ethical decision-making skills in order to practice as independent healthcare professionals. They are expected to engage in continuing professional development (CPD) to keep abreast of rapidly evolving advanced technologies and new healthcare practices; as well as to ensure evidence-based practice by upholding their knowledge, insight and technical competence. A sound knowledge of human anatomy, pathophysiology, medical terminology, science of imaging, patient care, human rights, ethics and health law and radiation effects as well as magnetic resonance imaging (MRI) electromagnetic effects, underpins this profession.

Diagnostic radiographers serve diverse healthcare needs and work in close collaboration with a wide range of healthcare professionals in a variety of healthcare setting viz. primary, secondary and tertiary levels of care; public and private healthcare settings as well as research centres.

**SCOPE OF PRACTICE FOR DIAGNOSTIC RADIOGRAPHERS:**

The list of work activities presented in this document are to be read in conjunction with the current *Regulations defining the scope of the profession of radiography*, relating specifically to the Diagnostic category and must also be read in conjunction with the *Ethical Rules of Conduct* and *Annexure 10* of these Rules as well as all relevant Board policies and guidelines*.* Annexure 10 provides a framework of professional and ethical practice standards for all radiographers. The activities below are practiced provided they fall within the Board approved education, training and competence of the diagnostic radiographer. Radiographers must only practice within the category of radiography for which they are registered with HPCSA. Their practice is subject to having the requisite education, clinical competence and experience to perform such examinations.

**NOTE: The current scope of profession is under review and is currently awaiting approval and promulgation by the National Minister of Health. The proposed review includes areas for role extension for diagnostic radiographers.**

- General x-rays examinations – conduct conventional diagnostic imaging of all anatomical regions according to prescribed protocols; examining soft tissue, bones, cavities and identification of foreign objects.
- The above conventional diagnostic images include projections in the antero-posterior, postero-anterior, lateral, oblique, or relevant modified planes, dependent on the imaging request.
- High speed, full-body, low dose scanning – conduct trauma, non-trauma and forensic full body scanning to produce skeletal and soft tissue images.
- Mobile radiography – perform relevant general examinations using mobile equipment in the wards, ICU's and emergency departments where patients are unable to be taken to the radiography department. Special precautions are to be used to prevent cross infection and protect health personnel and patients from radiation.
- Fluoroscopy – work in collaboration with the radiologist or specialist medical practitioner to create real-time images that demonstrate physiology, in accordance with the Board's *Guidelines for the use of Fluoroscopy Units*. These will include procedures in the radiology department. Radiographers may not

perform any fluoroscopic examination outside of this scope as their responsibility is to produce images and uphold their duty of care to the patient. The C-Arm fluoroscopy unit may be operated by a diagnostic radiographer in the operating theatre, vascular theatre and cardio-vascular theatres.

- Angiography – produce images of the vascular system but, may not cannulate or administer contrast media.
- Computed Tomography (CT) – produce cross-sectional images of the body but, may not cannulate or administer contrast media.
- Magnetic Resonance Imaging (MRI) – produce two, three or four-dimensional images of different tissue types within the body using electromagnetic waves but, may not cannulate or administer contrast media.
- Mammography – perform breast imaging examinations provided that an additional Board approved Mammography certificate has been obtained. This does not include the performance of Ultrasound unless the diagnostic radiographer has a Board approved qualification in the category of Ultrasound and is registered to practice within this field.
- Bone densitometry - perform densitometry studies for bone mineral density assessment and associated criteria.
- Dental radiography - perform dental imaging studies of the dentition, mandible and maxilla and other facial bones where relevant.
- Forensic radiography - perform forensic imaging studies for medico-legal purposes which may include conventional diagnostic examinations, fluoroscopy, dental radiography, post-mortem CT, post-mortem MRI and high-speed, low dose, full-body x-ray scanning.

Diagnostic radiography tasks involve:

- Correctly identifying the patient and explaining the procedure to the patient;
- Assessing the request form for justification of the examination being requested;
- Ensuring that the request form has been completed and signed by a healthcare practitioner who is registered in terms of any legislation regulating healthcare practitioners in South Africa and who may request x-ray examinations subject to the scope of their profession;
- Assessing patients and their clinical history to determine appropriate radiographic protocols and techniques;

- Performing a range of radiographic examinations on patients to produce high-quality, diagnostic images, and evaluating these images for medico legal requirements and technical quality;
- Observing the wellbeing of patients and maintaining contact with them during their waiting, examination and post-examination stay in the radiography department;
- Working with radiologists and other specialists to produce images in a variety of procedures that need radiographic imaging systems or equipment;
- Providing support and reassurance to patients, considering their physical and psychological needs;
- Recording the imaging identification and patient documentation accurately and observing protocols to ensure compliance with the patients' rights to privacy and confidentiality;
- Supervising students, practitioners and auxiliary staff through delivering of appropriate and relevant education, training and mentoring;
- Understanding and observing health and safety at work as well as welfare issues, including infection control policies and ionising radiation regulations in order to protect themselves and others;
- Ensuring that equipment is regularly checked for malfunctions and reporting any faults immediately.
- Performing quality control tests on imaging accessories and x-ray equipment in collaboration with officials from the Radiation Control Directorate of the Department of Health and the technicians from the technical companies.
- Performing professional duties, respecting the basic human rights of patients and others, and always observing ethical responsibilities and health law.
- Participating in research studies where imaging is needed, in accordance with national and HPCSA research guidelines.

**Document compiled by:**

Radiography and Clinical Technology Board

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