

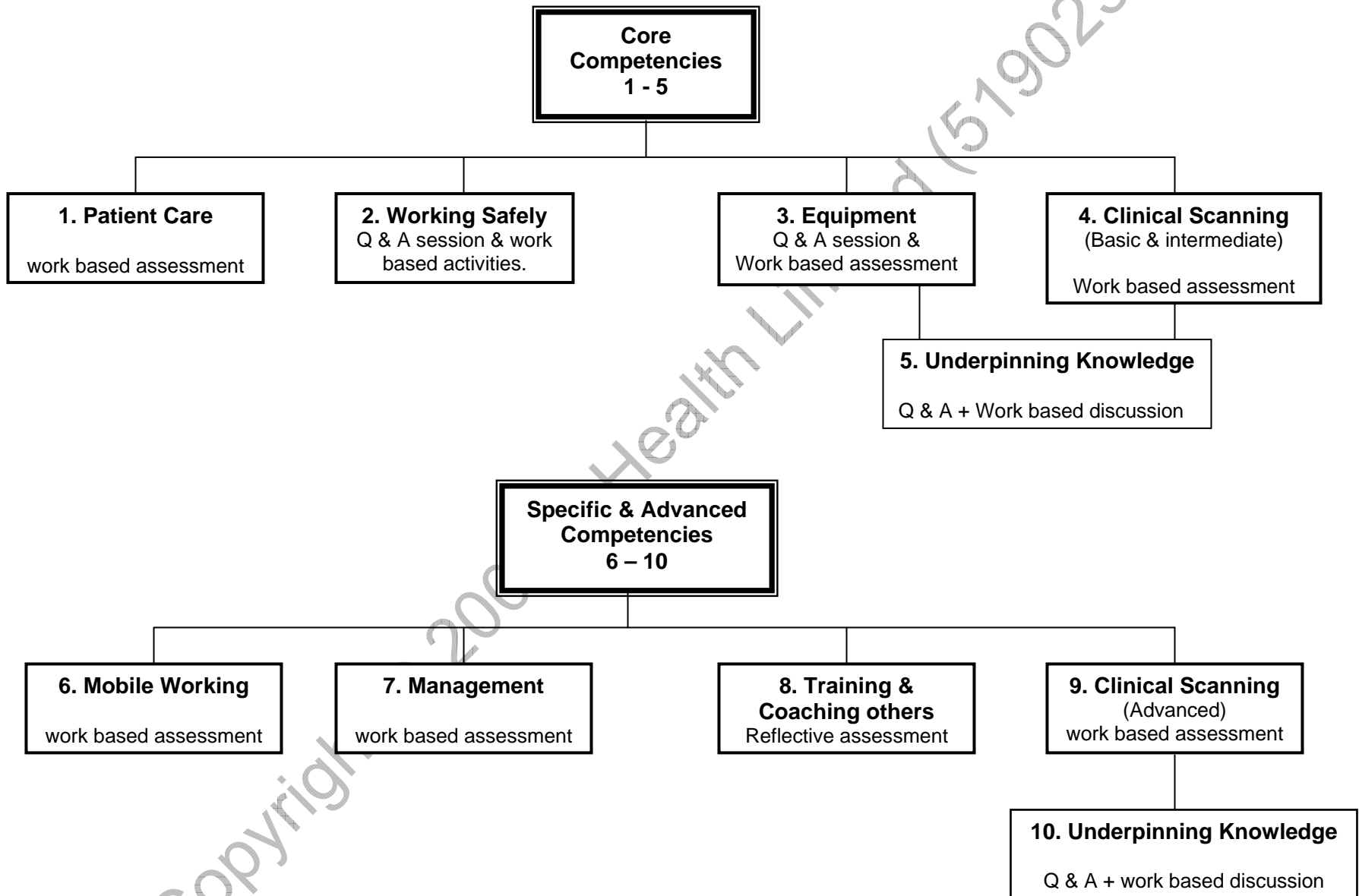
InHealth Limited	Title:	MRI Competency Framework and Assessment Tool
	Issued by:	Gill Winter
	Approved by:	Sarah Wilson
		Signed _____
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InHealth Limited

MRI Competency Framework & Assessment Tool

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Competency Framework – MRI Radiographers



METHOD OF ASSESSMENT

CORE COMPETENCIES:

ONE – PATIENT CARE
TWO – WORKING SAFELY AND
THREE - EQUIPMENT

Radiographers will be assessed on the first 3 core competencies **within the first month** of their employment and must be able to demonstrate second level competency, as a minimum, in order to progress to the clinical scanning assessments.

SPECIFIC COMPETENCY:

SIX – MOBILE WORKING

Mobile radiographers will be assessed on this specific competency during towards the **end of their first month** of employment and are encouraged to refer to the mobile assessors in their region during this first month to help them prepare.

CORE COMPETENCIES:

FOUR - CLINICAL SCANNING AND
FIVE - UNDERPINNING KNOWLEDGE

In order to demonstrate their competency in clinical scanning, radiographers will undertake a series of assessed examinations. They will be observed carrying out the examination during which the assessor will ask questions in order to make an assessment of their choices, reasoning and understanding of MRI physics, equipment and anatomy.

Radiographers will also be assessed on their understanding of topics listed under “underpinning knowledge” and are required, prior to the assessment, to make brief notes on their understanding of these topics and bring these notes to the assessment. The assessor will evaluate your level of understanding using these notes and he/she may ask you questions.

Radiographers new to MRI, may wish to delay assessment of underpinning knowledge until they have attended the Basic MRI Course. Please let the assessor know if you wish to do so and arrange a place on the first available Basic Course through your line manager as soon as possible.

Assessed examinations:

BASIC: Radiographers have **up to 6 months** to carry out assessed examinations in the areas listed below. Experienced MR radiographers may choose to undertake all their assessments within the first 6 – 8 weeks of employment whilst newcomers to MRI may wish to take the full 6 months.

Brain

Lumbar or Cervical Spine

Knee

Shoulder

MRCP

One joint chosen from: foot *or* ankle *or* wrist *or* elbow

INTERMEDIATE: After achieving competency in the basic examinations, radiographers have up to a further 6 months to carry out further assessments of the areas listed below (if they are considered appropriate to their area of work).

Musculo-skeletal miscellaneous (lumps, bumps and tears).

An extremity of choice (not assessed before)

Liver +/- IV contrast

Male or Female soft tissue organs of the pelvis

Soft tissue neck

None-contrast MR angiography Circle of Willis or Carotids -

COMPETENCY ASSESSMENT GRADING

Grading	Clinical Skills	Theory & Knowledge
Initial – I First level competency	<ul style="list-style-type: none"> • Carried out the activity safely & accurately but required support • Required prolonged time to complete the activity • Required supervision in many aspects of the activity • Lacks confidence in the skill 	<ul style="list-style-type: none"> • Demonstrated a broad understanding of the theory & knowledge • Needed prompting to provide answers
Developing – D Developing competency	<ul style="list-style-type: none"> • Carries out the activity competently but requires support if the unexpected occurs • Makes safe judgements and good decisions • Evidence that the radiographer is using theory and knowledge in their decision making • Is gaining confidence in the skill 	<ul style="list-style-type: none"> • Demonstrates broad understanding of the theory behind the clinical skills without any prompting. • Can provide more in depth theory, with prompting
Competent – C Competent practitioner	<ul style="list-style-type: none"> • Safe and effective delivery of care • Anticipates and recognises problems and reacts appropriately if the unexpected occurs • Is aware of own limitations and seeks advice • Comfortable and confident in the skill 	<ul style="list-style-type: none"> • Demonstrates a sound understanding of the theory and knowledge underpinning their clinical practice

COMPETENCY ONE: PATIENT CARE – Ensures that patient care is of a high standard and individualised to each patient.

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
1.1 Interacts appropriately with patients	Demonstrates concern and respect for patients and their carers.		
	Maintains patient dignity at all times.		
	Recognises patients who are feeling particularly anxious or concerned.		
	Provides appropriate support and reassurance to such patients.		
	Demonstrates an awareness of, and responds to, the specific cultural or spiritual requirements of individuals.		
	Demonstrates sound strategies for managing the claustrophobic patient.		
	Responds appropriately to a patient request for a chaperone.		
	Explains the procedure fully to the patient prior to the examination.		
	Ensures that patient queries are answered before proceeding with the examination.		
	Anticipates individual patient's requirements eg. children, the elderly, deaf, blind and those with restricted movement.		
	Uses appropriate positioning aids to ensure patient comfort and safety.		
	Provides the patient with clear guidance on their immediate aftercare and follow up for results.		

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
1.2 Communicates effectively with patients, relatives and carers.	Greet and identifies the patient appropriately.		
	Radiographer introduces him or herself to the patient and explains their role in the examination.		
	Ensures privacy and confidentiality in all discussions with patients, relatives and carers.		
	Demonstrates effective verbal communication skills.		
	Explains procedures using language that the patient will understand.		
	Identifies and follows correct procedure for accessing translation services.		
	Demonstrates effective listening skills.		
	Ensures that the individual understands what has been explained to them before proceeding.		
	Uses appropriate non verbal communication (body language) during all exchanges with patients and relatives.		
	Maintains two way communication with the patient throughout the examination.		

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
1.3 Obtains valid and effective consent for MR examination.	Is able to explain the nature and purpose of the examination to the patient.		
	Explains significant risks (if any) to the patient.		
	Radiographer does not pressure the patient to undergo the examination in any way.		
	Demonstrates the ability to explain risks and benefits of the examination to the patient in a way that the patient will understand.		
	Is aware of when to obtain written as opposed to verbal consent.		
	Understands and applies the law relating to children and young people (under 18s) and consent.		
	Understands and applies the law relating to adults who lack the capacity to consent for themselves.		
	Identifies and applies correct procedure should consent be refused or withdrawn.		
	Is able to explain the alternatives to the MR examination and the implications if the patient chooses to refuse all or part of the examination.		

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
1.4 Understands and applies best practice with respect to data protection legislation and information security in the workplace.	Is able to outline the radiographer's responsibilities with regard to patient identifiable information.		
	Disposes of confidential waste according to law and local policy.		
	Does not, unnecessarily, use patient identifiable information during verbal communication either face to face or when on the telephone.		
	Adheres to the law and InHealth Information Security Management Policy with respect to all use of telephone, fax and Email in the workplace.		

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COMPETENCY TWO: WORKING SAFELY – Has an understanding of policy and legislation on Health and Safety and maintains a safe working environment for self, patients and colleagues.

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
<p>2.1</p> <p>Demonstrates knowledge and application of MRI safety procedures.</p>	Can correctly identify the controlled area in their place of work.		
	Applies appropriate screening procedures for those individuals, (patients, staff & visitors) entering the controlled area.		
	Has read InHealth MRI safety procedures and takes appropriate action regarding a range of metal implants and devices.		
	Understands and correctly applies InHealth policy on intra ocular foreign bodies in their place of work.		
	Understands and correctly applies InHealth policy on MRI in the pregnant patient		
	Understands and correctly applies InHealth policy when patients are unable to complete a safety questionnaire themselves ie. patients who do not understand English & those with diminished mental state.		
	Can explain the term Specific Absorption Rate (SAR), it's potential risk to the patient and acts accordingly when a SAR warning appears on the scanner.		
	Demonstrates appropriate positioning of the patient, RF coils, coil cables and other leads to minimise the risk of contact burns.		
	Is aware of and can access standard sources of information on MR safety, regulations and advice.		
	Understands the circumstances in which a radiographer may be required to “quench” the magnet and how to do so. Also, how to isolate the power without quenching the magnet.		

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
2.2 Understands and applies Health & Safety legislation in the workplace	Is aware of their principal responsibilities regarding health and safety in the workplace.		
	Knows who the representative of Health & Safety is for their part of the organisation.		
	Knows the action to take if a health and safety hazard is identified or brought to their attention.		
	Has familiarised him or herself with the principal risks identified in their area of work (via the local risk register).		
	Knows to whom incidents are reported, the method of reporting and lines of communication.		
	Demonstrates a sound understanding of infection control issues in relation to environmental cleanliness and their role in maintaining it.		
	Demonstrates a sound understanding of “standard precautions” in relation to the prevention of the spread of infection; and acts accordingly.		
	Understands situations when hands should be washed and when hand rub can be substituted.		
	Can state when only cleaning is necessary and the circumstances when disinfection is required.		
	Is aware of the fire regulations in their place of work ie: number to call, how to evacuate & location of assembly point.		

Criteria	Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
2.3 Understands and acts according to InHealth training & procedures in the event of a patient emergency or urgent scan finding.	Demonstrates good strategies in the identification and treatment of patients suffering from a panic attack brought on by claustrophobia & anxiety.		
	Can accurately describe (or demonstrate) the procedure to be followed in the event of an unexpected urgent finding on a scan.		
	Can accurately outline the local procedure for the management of a cardiac arrest in their place of work.		
	Knows the number to call in the event of a cardiac arrest in their place (or places) of work.		
	Has participated in a practice cardiac arrest scenario in their place of work.		
	Is aware of the location and layout of the resuscitation equipment identified for the use of the department.		
	Is able to demonstrate the quality assurance checks carried out on the defibrillator (if it belongs to InHealth).		

CORE COMPETENCY THREE: EQUIPMENT, THE MRI SCANNER - Proper use of medical imaging equipment is an essential component in the safe delivery of healthcare. In demonstrating competence, staff should be able to operate the equipment appropriately and understand the basic principles underlying it's configuration & operation.

Radiographers must be assessed on each manufacturer & model of system they are required to use.

MRI Scanner: Manufacturer & Model # 1 : _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
3.1 Skills:		
Performs start up and shut down procedures correctly		
Demonstrates safe use of table and gantry controls		
Is able to perform QA procedure for the system concerned including helium level check.		
Is able to register a patient manually or from a RIS scheduler.		
Is able to access and select specific protocols & subsequently, sequences.		
Can locate and, where necessary, manipulate sequence parameters.		
Understands & can demonstrate appropriate windowing and image presentation.		
Can use manual filming function correctly including changing of film format.		
Is able to archive, retrieve and transfer to and from other locations or storage media.		
Can demonstrate correct positioning of each coil included in the system configuration.		
3.2 Knowledge: Assess only once ie. do not repeat for each manufacturer & model.		
Is able to explain the term superconducting magnet.		
Is able to identify the direction of the main magnetic field (B0) on their system.		
Can explain the purpose of gradient coils.		
Can explain the purpose of shim coils.		
Can explain the purpose of receiver coils.		
Can define the term "quench" in relation to the MR system.		
Can identify the location of the quench pipe and it's purpose.		
Understands the role of the coldhead and of the chiller Units.		

CORE COMPETENCY THREE: EQUIPMENT, THE MRI SCANNER - Proper use of medical imaging equipment is an essential component in the safe delivery of healthcare. In demonstrating competence, staff should be able to operate the equipment appropriately and understand the basic principles underlying it's configuration & operation.

Radiographers must be assessed on each manufacturer & model of system they are required to use.

MRI Scanner: Manufacturer & Model # 2 : _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
3.1 Skills:		
Performs start up and shut down procedures correctly		
Demonstrates safe use of table and gantry controls		
Is able to perform QA procedure for the system concerned including helium level check.		
Is able to register a patient manually or from a RIS scheduler.		
Is able to access and select specific protocols & subsequently, sequences.		
Can locate and, where necessary, manipulate sequence parameters.		
Understands & can demonstrate appropriate windowing and image presentation.		
Can use manual filming function correctly including changing of film format.		
Is able to archive, retrieve and transfer to and from other locations or storage media.		
Can demonstrate correct positioning of each coil included in the system configuration.		
3.2 Knowledge:		
Is able to explain the term superconducting magnet.		
Is able to identify the direction of the main magnetic field (B0) on their system.		
Can explain the purpose of gradient coils.		
Can explain the purpose of shim coils.		
Can explain the purpose of receiver coils.		
Can define the term "quench" in relation to the MR system.		
Can identify the location of the quench pipe and it's purpose.		
Understands the role of the coldhead and of the chiller Units.		

CORE COMPETENCY THREE: EQUIPMENT, THE MRI SCANNER - Proper use of medical imaging equipment is an essential component in the safe delivery of healthcare. In demonstrating competence, staff should be able to operate the equipment appropriately and understand the basic principles underlying it's configuration & operation.

Radiographers must be assessed on each manufacturer & model of system they are required to use.

MRI Scanner: Manufacturer & Model # 3 : _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
3.1 Skills:		
Performs start up and shut down procedures correctly		
Demonstrates safe use of table and gantry controls		
Is able to perform QA procedure for the system concerned including helium level check.		
Is able to register a patient manually or from a RIS scheduler.		
Is able to access and select specific protocols & subsequently, sequences.		
Can locate and, where necessary, manipulate sequence parameters.		
Understands & can demonstrate appropriate windowing and image presentation.		
Can use manual filming function correctly including changing of film format.		
Is able to archive, retrieve and transfer to and from other locations or storage media.		
Can demonstrate correct positioning of each coil included in the system configuration.		
3.2 Knowledge:		
Is able to explain the term superconducting magnet.		
Is able to identify the direction of the main magnetic field (B0) on their system.		
Can explain the purpose of gradient coils.		
Can explain the purpose of shim coils.		
Can explain the purpose of receiver coils.		
Can define the term "quench" in relation to the MR system.		
Can identify the location of the quench pipe and it's purpose.		
Understands the role of the coldhead and of the chiller Units.		

BASIC: Clinical Assessment: Brain

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables		
Selects correct protocol & sequences for the site in question.		
Is aware of variations in protocols for: Multiple Sclerosis (MS), Epilepsy, Pituitary, IAMS, History of head trauma.		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRI of the brain		
Typical sequences used in MRI of the brain and why		
Scan parameters to achieve T1 and T2 weighted images		
Optional extra sequences. Why they might be done, in what plane & what contrast weighting: FLAIR Gradient Echo Temporal lobes		
Common abnormalities of the brain & their MRI appearance.		
Anatomy of the brain in the 3 planes.		

BASIC: Clinical Assessment: Lumbar or Cervical Spine

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables		
Selects correct protocol & sequences for the site in question.		
Is aware of variations in sequences for: a patient in severe pain, a patient with history of cancer where metastases are suggested & post op < 5ys		
Can demonstrate how to access sequence parameters and make changes where appropriate		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRI of the lumbar spine.		
Typical sequences used in MRI of the lumbar spine and why		
Phased array/multi element coils		
Optional extra sequences, why they may be done, in what plane & contrast weighting: STIR Contrast enhancement		
Common abnormalities of the lumbar spine & their MR appearance.		
Anatomy of the lumbar spine in the sagittal & axial planes.		

BASIC: Clinical Assessment: Knee

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Selects correct protocol & sequences for the site in question.		
Makes use of surveys and performs sequences in the most logical order		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRI of the knee		
Typical sequences used in MRI of the knee and why.		
Scan parameters that affect spatial resolution and how they affect scan time.		
Common abnormalities of the knee & their MRI appearance with particular reference to: Meniscal tears Cruciate ligament disruption/rupture Patella, cartilage & ligament abnormalities		
Anatomy of the knee in all 3 planes.		

BASIC: Clinical Assessment: Shoulder

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Selects correct protocol & sequences for the site in question.		
Makes use of surveys & performs sequences in the most logical order		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRI of the shoulder		
Typical sequences used in MRI of the shoulder, slice positioning and reasons why.		
Fat suppression techniques: 2 different ways of achieving fat suppression		
Common abnormalities of the shoulder & their MRI appearance with particular reference to: Rotator cuff tear Impingement		
Clinical indications for MR arthrography of the shoulder joint		
Anatomy of the shoulder joint in the coronal oblique, sagittal oblique & axial planes.		

BASIC: Clinical Assessment: MRCP:

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination including clear instruction on breath-holding		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Positions & uses respiratory bellows correctly (if in use on this scanner).		
Selects correct protocol & sequences for the site in question.		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRCP		
Typical sequences used in MRCP and reasons why		
Methods for preventing phase wrap (foldover)		
Advantages & disadvantages of various methods for minimising respiratory motion including: Breath-holding Respiratory triggering Respiratory compensation		
Anatomy of the biliary tree.		

BASIC: Clinical Assessment: Foot / ankle / elbow / wrist (Radiographer's choice)

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Selects correct protocol & sequences for the site in question.		
Is aware of variations in sequences for: a patient who is moving & a patient who has had previous surgery to stabilise the spine with wire		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for the area you have chosen.		
Typical sequences used in MRI of this area what the sequences are used to demonstrate.		
Main factors that affect SNR and their effect on the scan time when altered.		
Particular difficulties encountered when imaging the area of choice and how you will address them.		
Common abnormalities of the area and their MR appearance		
Anatomy of the area in three planes.		

INTERMEDIATE: Clinical Assessment: Musculo-skeletal (miscellaneous lumps, bumps or tears).

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Selects correct protocol & sequences for the site in question.		
Makes use of surveys & performs sequences in the most logical order		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRI of the joint/area of choice		
Typical sequences used in MRI of the joint/area of choice.		
Anatomy of the joint/area of choice in all 3 planes.		

INTERMEDIATE: Clinical Assessment: Extremity which has not been assessed yet

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination.		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Selects correct protocol & sequences for the site in question.		
Makes use of surveys & performs sequences in the most logical order		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are advised to investigate the following subjects as they may be asked about them during the assessment.		
Typical indications for MRI of the joint/area of choice		
Typical sequences used in MRI of the joint/area of choice.		
Use of 3D acquisitions in musculoskeletal MR.		
Anatomy of the joint/area of choice in all 3 planes.		

INTERMEDIATE: Clinical Assessment: Liver (with and without contrast enhancement) :

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination including clear instruction on breath-holding		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Can load and ready the pressure injector for use (if appropriate to site)		
Selects correct protocol & sequences for the site in question.		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for contrast enhanced liver MRI		
Typical sequences used in liver MR imaging and reasons why		
Gradient Echo sequences		
Chemical misregistration & in and out of phase imaging in the liver		
Paramagnetic IV contrast agents		
Use of liver specific contrast agents.		
Anatomy of the upper abdomen in the axial plane.		

INTERMEDIATE: Clinical Assessment: Soft tissue organs of the pelvis

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Is aware of variations in protocols for: prostate, cervix & endometrium, rectum, bladder, fistula in ano.		
Selects correct protocol & sequences for the site in question.		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for pelvic MRI in the male and female patient.		
Typical sequences used to image benign gynae pathologies and reasons why		
Typical sequences used to stage various pelvic cancers		
Optimising SNR and spatial resolution in SFOV imaging of pelvis cancers.		
Minimising involuntary motion artefacts in pelvic MRI		
Anatomy of the female pelvis in all 3 planes		
Anatomy of the male pelvis in all 3 planes		

INTERMEDIATE: Clinical Assessment: Soft tissue neck, oro or nasopharynx

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination including clear instruction on swallowing		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Is aware of variations in protocol for imaging: the oropharynx & tongue, larynx, salivary glands		
Selects correct protocol & sequences for the site in question.		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for MRI of the soft tissues of the neck		
Typical sequences used to image soft tissue structures of the neck and reasons why		
Advantages and limitations of Fast Spine Echo sequences		
Methods of reducing flow related, pulsatile artefacts in the neck		
Anatomy of the neck in all 3 planes		

INTERMEDIATE: Clinical Assessment: Vascular MRI – MR Arteriography or MR Venography

Date: _____

Assessor: _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
4.0 Clinical Scanning Skills:		
Selects correct coil for the examination.		
Prepares the patient for the examination including clear instruction on breath-holding		
Positions the patient and the coil correctly for the examination		
Is aware of any safety issues relating to positioning of the coil & cables.		
Selects correct protocol & sequences for the site in question.		
Can demonstrate how to access sequence parameters and make changes where necessary.		
Correctly positions the slice group or volume for the area under examination.		
Reviews images for quality, patient movement and pathology.		
Attends to the post examination needs of the patient.		
5.0 Underpinning Knowledge:		
Prior to the assessment, radiographers are required to make brief notes on the following subjects and bring them to the assessment.		
Typical indications for vascular investigation with MRI		
Typical sequences use for arterial studies and venous studies and reasons for choice.		
Time of Flight MR angiography		
Phase contrast MR angiography		
Anatomy of the Circle of Willis and principal intracranial draining veins.		

SPECIFIC COMPETENCY SIX: MOBILE WORKING - Mobile units may differ from one manufacturer of trailer and scanner to another.

Staff should be able to operate the equipment internally and have an awareness of the components of the mobile unit to troubleshoot appropriately and understand the basic principles underlying its configuration & operation.

MRI Scanner: Manufacturer & Model/Trailer : _____

Skills & Knowledge Indicators	Standard Achieved	Assessors Notes
6.1 Skills & knowledge: external		
Able to safely operate lift, gate and roller shutter door for all trailers		
Understands Lift Failure Policy and reporting procedure in place for patient safety.		
Understand the whereabouts of the phone and IT cables sockets in the belly compartments in case of failure and trouble shoots		
Understands the phone failure and reporting procedure		
Aware of any external issues that may affect safe working practice at each site		
Knows how to access the emergency door key held in the coded box on the front of each trailer		
Understands the procedure for safe coil storage on movement of the trailer		
Able to shut down the scanner and mobile unit correctly at the end of the day and make ready for movement		
Aware of the procedure to open the rear doors in case of emergency.		
6.2 Skills & knowledge: internal		
Performs start up and shut down procedures correctly for OEM		
Completes the daily checks of the defibrillator and O2 sensors and logs accordingly		
Is able to perform QA procedure for the system concerned including helium level check and temperatures of the primary and secondary water systems if accessible and report		
Understands the role and position of the cold head and of the chiller Units for resetting		
Is able to trouble shoot if the unit fails to boot up ie knowledge of the reconstructor, trip switches and chillers and report accordingly		
Understands the need to read the previous reports from staff in the daily diary and checks breakdown forms for information.		
Able to boot up the on- scanner PC and check the IT line is active.		

Able to access the core business day sheet and complete correctly with dissemination correctly as per the host site's requirements and company procedure		
Can access the VPN if no IT line for emails		
Understands the need to check the host's site file for up to date information and adds information when provided		
Understands and can show when asked the on site cardiac arrest procedure and policy		
Understands and can show when asked the on site fire policy		
Can recognise the patient's pathway and report correctly changes to it that may cause an incident		
Understands the need for storage and stock control on the unit as a Fire hazard		
Is able to register a patient manually or from a RIS scheduler.		
Is able to access and select site specific protocols & subsequently, sequences.		
Can locate and, where necessary, manipulate sequence parameters.		
Understands & can demonstrate appropriate windowing and image presentation pertinent to the site		
Can use manual filming function correctly including changing of film format to accommodate mobile site's needs		
Understands the host site's PACS needs and able to use both the scanner storage medium and Pukka J		
Can recognise artefacts caused by local interference and awareness of the perimeter field of a mobile unit		
Understands the weekly and monthly checks that are required in the mobile environment, completes and sends to MPT and stores correctly in file and on the PC		
Understands and follows the procedure of the host's contrast policy		
Understand the responsibility of Inhealth mobile staff to question concerns of practice of magnet safety and advise sites according and provide the supporting policies.		
Aware of the correct waste disposal procedure as per the site's procedure for clinical and household waste.		
Understands the host's requirements of the disposal of any confidential shredded paper		
Aware of the host's cross infection policy and the InHealth policy on infectious patients on the unit		
Understands and demonstrates the safety of site data at the end of the day by securely handing to a responsible person in the host site.		
Can complete and is aware of the cleaning procedure and COSHH for mobile unit and the correct forms to be documented		
Is able to archive, retrieve, and transfer to and from other locations or storage media.		

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