



## Higher National Unit specification: general information

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

**Unit code:** FN6K 35

**Superclass:** PB

**Publication date:** July 2011

**Source:** Scottish Qualifications Authority

**Version:** 01

### Unit purpose

The Unit develops the knowledge and skills required to undertake an OM orbit for the exclusion of foreign bodies (FB) prior to an Magnetic Resonance (MRI) examination and a lateral skull radiograph for completion of skeletal surveys in an adult examination. It is aimed at those currently working under the supervision of a radiographer (registered with the Health Professions Council) as an Assistant Practitioner within a diagnostic service. An example would be clinical departments providing an Imaging service.

On completion of this Unit candidates will be able to:

- 1 Describe brain, skull and orbit anatomy and pathology and explain why OM orbits and lateral skull would be requested.
- 2 Demonstrate the ability to perform OM orbit and lateral skull radiograph to diagnostic standards.
- 3 Critically evaluate resultant OM orbit and lateral skull radiograph.

### Recommended prior knowledge and skills

It is recommended that candidates should hold an HNC or equivalent in Diagnostic Imaging and be able to demonstrate a minimum of one year post qualification in employment as an Assistant Practitioner in Radiography.

## **General information (cont)**

### **Credit points and level**

1 Higher National Unit credit at SCQF level 8: (8 SCQF credit points at SCQF level 8\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

### **Core Skills**

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

### **Context for delivery**

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

The Unit will be delivered either as a standalone Unit or as part of a Group Award. (Professional Development Award, PDA) and will be delivered by a clinical diagnostic radiographer currently registered with the Health Professions Council and practicing in the appropriate clinical area with recent experience of clinical assessment.

### **Assessment**

It is recommended that the Outcomes within this Unit are assessed holistically through formative and summative Clinical Assessment. Candidates should be asked to assess patients' physical abilities with regards to positioning for OM orbits and Lateral Skulls, perform these examinations to diagnostic standards and critically evaluate both examinations.

The evidence from these clinical assessments should demonstrate that all Evidence Requirements have been met for each learning Outcome.

## Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### Outcome 1

Describe brain, skull and orbit anatomy and pathology and explain why OM orbits and lateral skull would be requested.

#### Knowledge and/or Skills

- ◆ Anatomy of the skull and facial bones including orbits
- ◆ Normal and abnormal radiographic appearances
- ◆ Referral process for orbits and the lateral skull. Use of The Royal College of Radiologists (RCR) Guidelines
- ◆ Clinical indicators why examinations are carried out

#### Evidence Requirements

The candidate will be required to provide evidence that he/she has the Knowledge and Skills to:

- ◆ describe the anatomy of the skull and facial bones including orbits
- ◆ demonstrate ability to recognise normal and abnormal radiographic appearances
- ◆ describe referral process and critically evaluate requests for both examinations
- ◆ comment upon clinical indications for both examinations.

#### Assessment Guidelines

Holistic Unit Assessment

It is recommended that candidates can describe brain, skull and orbit anatomy and pathology and explain why OM orbits and lateral skull would be requested during clinical assessment.

Candidates may also be asked to critically evaluate their own performance during the assessment.

## Higher National Unit specification: statement of standards (cont)

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

### Outcome 2

Demonstrate the ability to perform OM orbit and lateral skull radiograph to diagnostic standards.

#### Knowledge and/or Skills

- ◆ Positioning; equipment and patient
- ◆ Protocols and views guidelines
- ◆ Use of equipment
- ◆ Radiation dose and specifically lens dose
- ◆ Radiation protection of patient and staff (Ionising Radiation Regulations (IRR) and Ionising Radiation (Medical Exposures) Regulations, IR(ME)R)
- ◆ Perform post examination procedures

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ undertake an OM view of orbit and possible additional views
- ◆ undertake a lateral skull radiograph within Scope of Practise
- ◆ critically evaluate the use of PPE and how this will affect patient dose
- ◆ discuss radiation dose, specifically related to the lens
- ◆ critically analyse post procedure Radiology Information System (RIS) information.

#### Assessment Guidelines

Holistic Unit Assessment

It is recommended that candidates should perform a minimum of five OM orbits and five lateral skulls examinations on patients with a varying range of abilities, unaided by the Supervising Radiographer. This will include patients who cannot be examined in the erect position on a skull Unit to those who may need to be examined with a stationary grid or table and bucky in the supine position.

Candidates may be asked to discuss and identify the technical aspects of the examination and carry out a reflective analysis of their own performance.

## Higher National Unit specification: statement of standards (cont)

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

### Outcome 3

Critically evaluate resultant OM orbit and lateral skull radiograph.

#### Knowledge and/or Skills

- ◆ Collimation to appropriate anatomy
- ◆ Review image with supervisor to assess if additional images or views required
- ◆ Radiographic appearance of artefacts
- ◆ Radiographic appearance of different Foreign Bodies

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ critically evaluate for quality; discuss positioning, collimation and applied markers
- ◆ critically evaluate the radiograph and decide whether a repeat view is required
- ◆ evaluate image and identify whether artefacts are present and discuss

#### Assessment Guidelines

Holistic Unit Assessment

It is recommended that candidates should, following formative assessment, be able to successfully perform a minimum of five OM orbits and lateral skull radiographs at a diagnostic standard unaided by the Supervising Radiographer.

The candidates may be asked to discuss and identify the technical aspects of the examination and carry out a reflective analysis of their own performance. The candidate must be able to critically evaluate the images, identifying any improvements needed and carry out a reflective analysis of their own performance.

## Higher National Unit specification: support notes

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### Guidance on the content and context for this Unit

It is expected that candidates for this Unit will be working in a Clinical Diagnostic Radiography department as an Assistant Practitioner. Whilst practical clinical training is essential although simulation and role play can be used to widen the practical experience in a safe and stress free environment. Additionally, knowledge can be enhanced through tutorials, discussions, guided reading and reflective practice.

The candidate will be trained under the supervision of Health Professions Council registered Radiographers and will be expected to gain competencies in undertaking OM orbits or lateral skull radiography on a range of patients with varying degrees of mobility and clinical conditions. As a result, candidates are likely to be trained and assess predominantly with live case studies.

Candidates should be aware of additional annotation to their membership of the Society and College of Radiographers (SCoR) with clear information of the extension of their skill level.

Candidates are expected to undertake self directed learning and are recommended to use the websites and journals listed above.

Useful information to help with this Unit can be found in:

<a href="http://www.sor.org">www.sor.org</a>	(Society and College of Radiographers)
<a href="http://www.BIR.ac.uk">www.BIR.ac.uk</a>	(British Institute of Radiology)
<a href="http://www.RCR.ac.uk">www.RCR.ac.uk</a>	(Royal College of Radiologists)
<a href="http://www.hpa.org">www.hpa.org</a>	(Health Protection Agency)
<a href="http://www.healthcare-assistants.co.uk">www.healthcare-assistants.co.uk</a>	

and in the following professional journals:

*Synergy: Imaging and Therapy Practice*  
*Radiography*  
*Clinical Oncology*

## Higher National Unit specification: support notes (cont)

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

### Guidance on the delivery and assessment of this Unit

#### Delivery

This Unit is aimed at those currently working under the supervision of Health Professions Council registered Radiographers as Assistant Practitioners within a diagnostic service.

Initially, previous knowledge will need to be refreshed, particularly in the following areas:

- ◆ Ionising Radiation (Medical Exposure) Regulations (IR(ME)R)
- ◆ Manual Handling
- ◆ Control of Infection
- ◆ Communication skills, verbal, non verbal and written
- ◆ Departmental Radiology Information System
- ◆ Departmental Standard Operating Protocols
- ◆ Policies on Confidentiality

The delivery of this Unit will be undertaken in the clinical setting by HPC registered radiographers, who are currently practicing in General or Neuro Radiography and have experience of undertaking clinical assessments and will encompass practical in-house training, formative and summative clinical assessment. All three Outcomes of this Unit will be assessed through clinical practice with appropriate questions used by the Assessing Radiographer and recorded in the log book. It is expected that various degrees of clinical complexity will be documented within the log book to demonstrate a diverse learning experience. The log book will also include reflection on practice by the candidate and feedback from the assessor; this will culminate in a detailed pathway to the competence of the candidate.

While practical training is essential, simulation and role play can be used to widen the practical experience in a safe and stress free environment. Additionally, knowledge can be enhanced through tutorials, discussions, guided reading and reflective practice.

Candidates are expected to undertake self-directed learning and can use the web-sites and journals listed above.

## Higher National Unit specification: support notes (cont)

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

### Outcome 1

Describe brain, skull and orbit anatomy and pathology and explain why OM orbits and lateral skull would be requested.

Candidates should be able to fully describe the anatomy of the brain, orbit and skull and understand referral processes and access routes for the OM orbit prior to MRI and lateral skulls in the adult skeletal survey. Candidates should have knowledge of the Royal College of Radiologist Guidelines (RCR) regarding clinical indications for each examination. They should be aware of whether each examination can be justified through local IR(ME)R guidelines, being mindful that as an AP they cannot justify a request, however should have the insight whether it is justifiable. They should be conversant with common pathologies which may be found such as Myeloma, Paget's and metastatic disease, and be able to assimilate anatomy to the radiographic image, other lesser known pathologies may be demonstrated during training.

Enhanced communication skills are required to enable the candidate to take a full clinical history prior to OM radiograph, record history and pass on complex information to the supervising radiographer.

### Outcome 2

Demonstrate the ability to perform OM orbit and lateral skull radiograph to diagnostic standards.

Candidates should be able to use specialised equipment when available to produce the required images. If using stationary grids or erect/supine bucky systems, the candidate should discuss specific issues which may be encountered. Patient positioning according to clinical condition and mobility needs to be assessed prior to undertaking the examination. Selection of appropriate protocols and parameters is essential to a successful diagnostic view.

The candidate should be able to undertake the OM orbit and lateral skulls unassisted, acquiring the required image for the patient's clinical history. Radiation issues such as those of Ionising Radiation Regulations (IRR)/As Low As Reasonably Practical (ALARP) can be discussed. Patient radiation dose should be considered, particularly dose to the patient lens and risk factors for future radiographic procedures. Following examination, patient information must be sent to PACS and data of the examination recorded accurately on RIS, the resultant data should be interrogated regularly through the audit process. The candidate should be able to demonstrate that they understand implications of incorrect data entry and why additional information may need to be added. Resultant images should be retrievable from PACS.



## Higher National Unit specification: support notes (cont)

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### Outcome 3

Critically evaluate resultant OM orbit and lateral skull radiograph.

Candidates should be able to review resultant image and critically evaluate for; positioning, collimation to include required anatomy, use of applied markers and quality. Aspects such as cassette cleaning need to be discussed and potential problems of screen artefacts need to be addressed where applicable. Patient compliance regarding eye position is crucial to the diagnostic image and review of chin and orbital ridge should be critically reviewed on each examination. Resultant orbit images need to be reviewed carefully for potential foreign body and the candidate should have the communication skills to discuss with the patient whether additional images may be required. Lateral skulls require correct cassette siting and size depending upon expected pathology. The candidate should understand implications of a FB being found and be able to counsel the patient about the procedure that needs to be followed. Candidates should be able to explain variance in foreign bodies of the eye and industrial injuries and be able to distinguish between artefacts and actual foreign bodies.

Candidates should be able to distinguish between normal and abnormal appearances on the radiograph and discuss findings with the supervisor.

### Assessment

The practical element of the Unit should commence with the candidate observing the Radiographers undertaking OM orbits and lateral skull radiography with post-examination discussion including evaluation of the radiographic image. This could be followed by some examination simulation so that the candidate has time to analyse and reflect on the experience and discuss with the Radiographer.

Clinical Assessment to include clear discussion on the technical aspects (patient positioning, cassette/detector/tube positioning, tube angulation, centring point) and reflective analysis (patient care, effective communication, what would they do differently next time). The Assessor should also evaluate the effectiveness of communication throughout the examination.

All Clinical Assessment should conclude with the Assistant Practitioner critically evaluating the image, eg patient rotation, collimation, annotation, artefacts. The Assistant Practitioner should also be able to identify if the Diagnostic Reference Level (DRL) has been exceeded as a refresh of existing knowledge.

## Higher National Unit specification: support notes (cont)

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Formatively, this could then be applied practically, through Clinical Assessment with cases selected by the Supervising Radiographer commencing with fairly mobile patients and progressing through varying levels of complexity with regard to patient positioning and levels of support equipment. This may include patients on oxygen support, patients with monitoring equipment and patients with drip infusions. The Formative Clinical Assessments should be used to allow the candidate to reflect on their performance during an examination and can be used to direct the candidate towards a level of confidence for initiating the summative clinical assessments. This must be agreed by both the candidate and the Supervising Radiographer.

Although the Supervising Radiographer will check the final image, the Assistant Practitioner must be able to recognise good and substandard techniques in a comprehensive way and also assess the Outcome to the condition of the patient — sometimes a fairly poor image is a good Outcome for the physical condition of the patient.

The number of Clinical Assessments completed is not critical but the candidate must demonstrate that they can work unassisted through a range of increasingly complex examinations. It would be expected that they perform a minimum of five OM orbits and lateral skull examinations unaided by the Supervising Radiographer. Additionally, the Candidate themselves must indicate that they feel confident in performing these examinations: if they require further summative Clinical Assessments, these will be continued until such time as the Candidate is satisfied with their own performance.

### Open learning

Not applicable.

### Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

### Opportunities for developing Core Skills

There are no opportunities to develop Core Skills in this Unit.

## **Higher National Unit specification: support notes (cont)**

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

### **Disabled candidates and/or those with additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements).

## History of changes to Unit

Version	Description of change	Date

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## General information for candidates

**Unit title:** Radiography: Orbito-Meatal (OM) of the Orbit and Lateral Skull Radiography using Static Equipment in the Non-Acute Setting

This Unit is designed to prepare and support candidates working in a Diagnostic Radiographic environment as an Assistant Practitioner to extend their scope of practice by providing them the essential underpinning knowledge and skills required to undertake OM views and lateral skull examinations using static X-ray equipment.

You will learn how to evaluate images which are less standardised than those currently within your scope of practice and guidance on this will be given in a tutorial environment as well as during clinical practice.

The delivery of the Unit will be undertaken in the workplace (it is not College-based) through the Departmental staff (this may include Radiographers, Radiologists and other staff as appropriate) and will encompass practical in-house training and formative and summative clinical assessments by Radiographers registered with the Health Professions Council. All three Outcomes of the Unit will be assessed through Clinical Practice with appropriate questions used by the Assessing Radiographer and recorded in a log book. The log book will also include reflection on practice by the candidate and feedback from the observer and this will culminate in a detailed pathway to competence by the candidate.

Whilst practical clinical training is essential, simulation and role-play may be used to widen the practical experience in a safe and stress-free environment. Additionally, knowledge may be enhanced through tutorials, discussions, guided reading and reflective practice.

Candidates are expected to undertake self-directed learning and can use the web-sites and journals listed below.

The principles of safe practice with respect to Manual Handling, Health and Safety, Radiation Safety and Protection, and Infection Control will be revisited and refreshed. Additionally, the key principles of effective communication will be reinforced with specific reflection to the scenarios that the candidate experiences throughout their Formative Clinical Assessments to enable functional communication for the Summative Clinical Assessments.

Useful information to help with this Unit can be found at the following web-sites:

<a href="http://www.sor.org">www.sor.org</a>	(Society and College of Radiographers)
<a href="http://www.BIR.ac.uk">www.BIR.ac.uk</a>	(British Institute of Radiology)
<a href="http://www.RCR.ac.uk">www.RCR.ac.uk</a>	(Royal College of Radiologists)
<a href="http://www.hpa.org">www.hpa.org</a>	(Health Protection Agency)
<a href="http://www.healthcare-assistants.co.uk">www.healthcare-assistants.co.uk</a>	

and in the following professional journals:

*Synergy: Imaging and Therapy Practice*  
*Radiography*  
*Clinical Oncology*