



Higher National Unit specification

General information

Unit title: Clinical Assessment of Sports Injuries (SCQF level 8)

Unit code: H71M 35

Superclass: PB

Publication date: June 2014

Source: Scottish Qualifications Authority

Version: 02

Unit purpose

This Unit is designed to provide the learner with competence in carrying out and understanding the principles of clinical examination processes used in the assessment of musculoskeletal injury. This Unit along with knowledge and skills developed in previous Units should furnish the learner with the skills required to become competent in clinical examination and allow them to evaluate clinical findings in order to identify common injuries. The Unit will also give the learner the skills to prioritise and plan an appropriate injury management programme.

Outcomes

On successful completion of the Unit the learner will be able to:

- 1 Identify, Palpate and mark anatomical structures.
- 2 Perform an Objective examination
- 3 Evaluate the findings of an objective assessment.

Credit points and level

2.5 Higher National Unit credits at SCQF level 8: (20 SCQF credit points at SCQF level 8)

Recommended entry to the Unit

It is recommended that the learner has successfully completed HN Units *Functional Anatomy, Anatomy and Physiology, Basic Subjective and Objective Assessment, Exercise Principles* and *Testing and Pathology and Aetiology of Sports Injury*. However, entry is at the discretion of the delivering centre.

Higher National Unit Specification: General information (cont)

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Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skills None

Core Skill component(s) Critical Thinking at SCQF level 5

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit Specification.

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 Assessment Support Pack (ASP) for this Unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Higher National Unit specification: Statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

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. Learners 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

Identify, palpate and mark anatomical structures.

Knowledge and/or Skills

- ◆ Origin, Insertion and actions of the muscles surrounding the major joints
- ◆ Location of tendons
- ◆ Location of Ligaments
- ◆ Location of joint lines
- ◆ Location of peripheral nerves
- ◆ Location of pulse points of major vessels
- ◆ Dermatomal distribution of upper and lower extremities

Outcome 2

Perform an objective examination.

Knowledge and/or Skills

- ◆ Prepare client for examination
- ◆ Informed consent
- ◆ Objective examination procedures of ankle, knee, hip, wrist and hand, elbow, shoulder
- ◆ Screening assessment of cervical and lumbar spine

Outcome 3

Evaluate the findings of the objective examination.

Knowledge and/or Skills

- ◆ Compare normal to abnormal parameters
- ◆ Objective findings in common injuries
- ◆ Rationale behind objective testing
- ◆ Management according to findings

Higher National Unit specification: Statement of standards (cont)

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Evidence Requirements for this Unit

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills across all Outcomes.

Outcome 1

Assessment for this Outcome will take the form of a practical under controlled conditions. This assessment may be assessed with Outcome 3 and will assess handling, palpation, communication skills, and anatomical knowledge. The learner will have no prior knowledge of the sample to be used and a different sample will be used in each assessment occasion.

Performance evidence should be gathered from direct observation of the learner in a controlled environment as they perform a minimum of 12 practical anatomy procedures randomly selected from the ranges provided.

- ◆ Identify muscles in terms of origin insertion
- ◆ Demonstrate actions of major muscles
- ◆ Identify, palpate and mark tendons
- ◆ Identify, palpate and mark ligaments
- ◆ Identify, palpate and mark joint lines
- ◆ Identify and mark superficial landmarks of peripheral nerves
- ◆ Identify superficial landmarks of major blood vessels
- ◆ Identify upper and lower limb dermatomal distribution
- ◆ Demonstrate safe and effective handling skills

Outcome 2

Assessment should be conducted in a controlled environment by direct observation of the learner as they perform an objective examination of a model/client. A case study may be chosen at random from a full collection of right and left side of each major joint above. Each case study should contain information on which to base oral/written questioning for Outcome 3. An assessor checklist should be used to record information.

- ◆ Inform and prepare client for objective assessment
- ◆ Perform objective examination techniques:
 - Observation, touch, active, passive, resisted movements, specific muscle testing, ligament stress testing, special tests, neurological tests appropriate to joint area — hip, knee, ankle, shoulder, elbow, wrist and hand, palpation, functional tests, joints above/below
- ◆ Follow a recognised sequence of examination
- ◆ Demonstrate safe, effective and appropriate examination procedures and handling skills
- ◆ Demonstrate appropriate interpersonal skills
- ◆ Demonstrate clear explanation and instruction
- ◆ Deal with factors influencing examination correctly and ethically according to standards

Higher National Unit specification: Statement of standards (cont)

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Outcome 3

This will be evidenced by oral and/or written responses to questioning based on the objective examination. A minimum of six questions should be addressed. A sample from of each evidence item should be used.

- ◆ Determine abnormal changes to range of movement and factors limiting range
- ◆ Evaluate causes of normal and abnormal end feels
- ◆ Explain the clinical reasoning behind:
 - Observation, touch, active, passive, resisted movement testing, special muscle testing, special tests, ligament stress testing, sensory testing, deep tendon reflexes, myotomes
- ◆ Evaluate the choices in the next stages of management according to objective findings
 - Rehabilitation, re-assessment of joints above and below, referral



Higher National Unit Support Notes

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Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 100 hours.

Guidance on the content and context for this Unit

Outcome 1

Joint movement should include: active, passive and resisted movement of the hip; knee; ankle; shoulder; elbow; wrist joint movement directions — flexion, extension, abduction, adduction, medial/lateral rotation, as appropriate for hip, knee, ankle, shoulder, elbow, wrist and hand.

Muscles of the major joints should be:

Hip: gluteus maximus/medius/minimus, psoas major, iliacus, tensor fascia lata, gracilis, adductor magnus/longus/brevis, sartorius.

Knee: quadriceps — rectus femoris, vastus medialis, lateralis and intermedius hamstrings — biceps femoris, semi tendonosis, semi membranosis, popliteus.

Ankle: gastrocnemius, soleus, tibialis anterior, tibialis posterior, peroneii, extensor hallucis longus, toe flexors/extensors.

Shoulder Joint and Girdle: deltoid- anterior and posterior fibres, latissimus dorsi, pectoralis major, teres major: rotator cuff- supra spinatus, infraspinatus, teres minor, subscapularis trapezius, rhomboids, serratus anterior.

Elbow: biceps, brachialis, brachioradialis, triceps, anconeus.

Wrist: flexors, extensors.

Hand: pollicus finger flexors/extensors.

Trunk: erector spinae, external oblique/internal oblique, rectus abdominus.

Tendons to be located should include:

iliotibial tract, patellar tendon, semi-membranosis, semi-tendonosis, biceps femoris, gracilis, tendo-achilles, tibialis anterior, peroneus longus, tibialis posterior, extensor hallucis longus toe flexors/extensors, extensor digitorum longus, extensor carpi radialis, extensor carpi ulnaris, extensor pollicis longus/brevis, abductor pollicis, palmaris longus, flexor capri radialis, flexor digitorum.

Higher National Unit Support Notes (cont)

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Ligaments to be located should include:

inguinal, medial collateral ligament/lateral collateral ligament of knee, anterior and posterior talo-fibular, calcaneo — fibular, anterior and posterior tibio-talar, tibio-calcaneal, tibio-navicular, medial collateral ligament and lateral collateral ligament of elbow.

Joint lines to be located should include:

gleno — humeral, acromio-clavicular, elbow, wrist, 1st carpo — metacarpal, metacarpal — phalangeal, interphalangeal (hand and foot), centre of hip, tibio — femoral, ankle.

Peripheral nerves at superficial points must include:

ulnar, median, common peroneal.

Major vessels pulse points should include:

brachial, axillary, carotid, popliteal, tibial, femoral, radial.

Outcome 2

All the major joint regions will be taught — hip, knee, ankle/foot, shoulder complex, elbow, wrist/hand.

Preparation of a client must include:

Suitably undressed, informed consent, clear explanation and instruction.

Observation must include: postural and local, alignment, muscle imbalance, bulk, swelling, bruising, colour changes, palor, rubor, facial expression.

Touch must include: temperature changes, sweating.

Movement — capsular/non capsular patterns of movement, inert/contractile signs.

Active movement — Full ranges, pain, willingness, ease of movement, pattern of movement, support, stabilisation, instruction.

Passive — end feel — normal — elastic, soft, hard, abnormal — springy, empty, hard range, pain, fixation, stabilisation, effectiveness, comfort, instruction, explanation.

Resisted — general screening of resisted movement at the joint, isometric, mid range and end range, support, stabilisation, effective maximal resistance.

Higher National Unit Support Notes (cont)

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Special muscle tests should include:

gluteus maximus/medius/minimus, tensor fascia lata, biceps femoris, semitendinosus, rectus femoris, vastus medialis, lateralis, tibialis posterior/anterior, gastrocnemius, soleus, supraspinatus, infraspinatus, anterior and posterior deltoid, latissimus dorsi, pectoralis major-sternal/clavicular fibres, trapezius — upper/middle fibres, serratus anterior, brachialis, brachioradialis.

Ligament stress tests could include — MCL, LCL of the knee, screening PCL, ACL knee (90 degree drawer test, Lachman's), ATF — drawer test, stress test, MCL/LCL elbow, MCL/LCL wrist.

Special tests could include: Hip — Thomas's Test, Trendelenberg; Knee — Meniscal-McMurrays, Appley, D Test; Ankle — Thompson's Squeeze Test, Proprioceptive; Shoulder — Scarf, Drop tests, Painful Arc, Passive Gleno-Humeral Abduction; Elbow — Tennis/Golfers Elbow; Wrist — Tinnel's.

Neurological tests should include: touch, sharp/blunt, hot/cold, deep tendon reflexes, myotomes.

A recognised sequence of examination must include: observation, touch, active, passive, resisted movement, specific muscle testing, ligament stress testing, special tests, good/bad side, palpation, functional tests.

Effective and appropriate handling skills should include: safe, comfortable, effective — stabilisation, fixation, support, positioning.

Interpersonal skills should include: body language, communication skills, eye contact, feedback sought from client, instruction, explanation, rapport established.

Factors that influence examination may include: client suitably undressed, modesty, temperature, privacy, chaperon if requested.

Screening of the vertebral column should include: cervical/lumbar spine; active movement, repeated movement, dermatomal distribution, paraesthesia, anaesthesia, pain, caudal signs — bladder.

Referral mechanism

Outcome 3

Abnormal changes to range of movement may include: decreased range, loss of ease of movement, end of range pain, painful arc.

Factors limiting range should include: soft tissue stretch, soft tissue contact, bone contact, scar tissue, loose bodies, pain, effusion, oedema, decrease in normal amount of movement, changes in pattern of movement, capsular/non capsular patterns of movement, instability, laxity.

Higher National Unit Support Notes (cont)

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Normal and abnormal end feels should include: normal end feels related to normal factors determining ROM — soft tissue stretch-elastic, soft tissue contact — soft, bone contact — hard; abnormal end feels empty/hard/springy.

Choices in the next stages of management should include: re-assessment of joints above/below, referral, prioritise and planning of rehabilitation, home advice, short term long term goals, sports specific, individual pain referral, red lights — bilateral paraesthesia/anesthesia, caudal signs.

Guidance on approaches to delivery of this Unit

This is a mandatory Unit in the awards HND Sports Therapy and should be delivered all the way through the 2nd year of the programme. Learners should be provided with plenty of opportunities to role-play objective assessments procedures prior to summative assessment of the Evidence Requirements.

Guidance on approaches to assessment of this Unit

Holistic assessment is preferred, although there are three instruments of assessment, these work well in one broad assessment situation. The learner is presented with a client case study, previously unknown to them and they perform a full clinical assessment as they would in a work environment.

Opportunities for 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 social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

This Unit has the Problem Solving component Critical Thinking embedded in it. This means that when the candidates achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 5.

There are opportunities for learners to extend their skills in *Communication, Numeracy, Information and Communication Technology (ICT), Problem Solving* and *Working with Others* in this Unit. Learners will also have the opportunity to develop interpersonal and reflective skills as a result of interacting with clients.

History of changes to Unit

Version	Description of change	Date
02	Core Skills Components Critical Thinking at SCQF level 5 embedded.	03/06/14

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General information for learners

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This Unit will provide you with the essential tools to assess an injury as it may present in a clinical environment. All management and advice to a client must be preceded by a clinical examination, you will be then making an informed judgement.

You will draw on the knowledge and skills developed in Year 1, further challenging yourself and improving your handling, communication and problem solving skills. The clinical reasoning skills and confidence gained as you work through this Unit will prepare you for work and further study as a Sports Therapist. This Unit will provide you with a solid foundation for clinical practice, one that you will build on throughout your career.

Self directed learning is encouraged and it is estimated that at least a further 100 hours of self-study will be required. Previous learning from all of your Year 1 Units will enhance the experience and you will find that the holistic approach to delivery and assessment will encourage you to put together all the skills and knowledge you have achieved so far.