

A6 Acute musculoskeletal and atraumatic limb presentations

Assessment of these competencies is via Mini-CEX, CbD (formative or summative) or ACAT-EM and a reflective log. In addition, key aspects of communication and professionalism can be captured through MSF.

In addition, key DOPs can be carried out as part of this module including PP9 Local and regional analgesia, procedural sedation, PP11 fracture reduction, PP12 dislocation reduction, PP13 simple wound closure and appropriate dressings, PP14 Limb immobilisation inc. splints/ POP/slings

Potential presentations in which these competencies could be assessed include the following:

- Acutely painful/swollen limb or joint: traumatic or non-traumatic
- Immediate management of closed or open fracture of limb
- Management of dislocation of joint (with/without associated fracture)
- Acute back or neck pain: traumatic or non-traumatic
- Complex wound affecting muscle/ tendon/nerve or vascular structure
- Acute musculoskeletal manifestations of known systemic disease, nutritional disorder or hereditary condition (including children presenting with developmental abnormality)
- Child with a limp

Core competencies to achieve (for all patients), are EPA level 3 (Indirect active-partial supervision by senior clinician, no prompting or help provided, direct line of vision or supervisor immediately available).

Knowledge/ Skill/ Behaviour	Detail of competency
Knowledge	Is able to demonstrate knowledge of bony/joint anatomy with relevant radiological appearances in the clinical context
	Demonstrates knowledge of types, mechanisms/patterns of injury, clinical and radiological presentations and initial treatment of: <ul style="list-style-type: none"> • common fractures (neck of femur/femur, ankle, wrist, hand) • common joint dislocations (hip, shoulder, ankle, patella) • musculo-tendinous injuries (e.g. Achilles rupture) • traumatic musculoskeletal back/neck pain • swollen/hot joint – inflammation or infection • spontaneously painful limb (e.g. ischaemia)
	Outlines the serious alternative causes of acute back pain such as malignancy, urological, spinal cord compression, AAA rupture
	Outlines the serious alternative causes of acute neck pain such as meningeal irritation, local infection and vascular causes

Knowledge/ Skill/ Behaviour	Detail of competency
	<p>With reference to back/neck pain: identifies features that raise concerns as to a more sinister cause ("red flags") and those that lead to a consideration of a chronic cause ("yellow flags")</p> <p>Knows the likely/ potential immediate, intermediate or long-term secondary issues related to injuries such as fractures e.g. nerve damage, compartment syndrome, wound management</p> <p>Demonstrates an awareness of the role of nutrition and degenerative conditions on bony metabolism and density with its effects on function and resilience in different patient groups</p> <p>Is able to describe and differentiate causes of limb pain such as ischaemia, venous thromboembolism, infection, inflammation, radiculopathy (nerve root compression/ infection e.g. shingles)</p> <p>Recalls the risk factors for the development of thrombosis and recognised risk scoring systems</p> <p>Can differentiate between mono and polyarthropathies, and their disease associations</p>
Skills- History	<p>Is able to take a full history including relevant details of mechanism of injury, including the forces/energy involved and circumstances such as protection e.g. clothing/helmet/seat-belt/air bag</p> <p>Establishes important details regarding occupational and activity-related (e.g. sport or musical instrument) dexterity and lateral dominance when presenting with limb injuries</p> <p>Establishes relevant past medical history especially in terms of previous joint or limb pain/swelling</p> <p>Correlates acute joint or limb pain/swelling with systemic signs or symptoms and/or multiple joint involvement</p>
Skills - Examination	<p>Is able to demonstrate assessment of limb and joint function, including detection of neurological and vascular compromise</p> <p>Can examine joints and spine to elicit any signs of swelling, pain or deformity, including range of movement</p> <p>Can elicit signs of meningeal irritation when assessing neck pain</p> <p>Can elicit signs of spinal cord compression/cauda equina syndrome when assessing patients with acute back pain</p> <p>Can assess the viability and perfusion of limb and differentiate pitting oedema; cellulitis; venous thrombosis; compartment syndrome; critical limb ischaemia</p>
Skills- investigation and treatment (in addition to PP9, PP10, PP11,	<p>Orders, interprets and acts on initial investigations appropriately: e.g. radiological, blood tests, Doppler studies, urine protein</p> <p>Is able to demonstrate the common techniques for joint and fracture immobilisation, including:</p> <ul style="list-style-type: none"> • local and regional anaesthesia (PP9, PP10) • fracture manipulation (PP11) e.g. Colles/distal radius

Knowledge/ Skill/ Behaviour	Detail of competency
PP12, PP13, PP14)	<ul style="list-style-type: none"> • reduction of dislocated joint (PP12) e.g. glenohumeral joint • wound care/coverage (PP13) • splintage/application of POP or sling (PP14)
	<p>Is able to prescribe appropriate analgesia/muscle relaxants for acute joint/limb or neck/back pain</p>
	<p>Recognises the need for serological investigations such as joint aspiration (recognising that local practice may vary as to where this occurs)</p>
Skills- Clinical decision making, judgement and planning (in addition to CC1)	<p>Recognises the time-critical nature of a potential cauda equina syndrome or limb ischaemia, the need for urgent investigations and senior/specialist intervention</p>
	<p>Can assess a wound for contamination and foreign body (e.g. glass) and risk of infection, including tetanus; offers appropriate prophylaxis (including immunoglobulin/vaccination) (see also PP13)</p>
	<p>Appropriately identifies more complex wounds that may require irrigation/debridement, tendon, vascular or nerve repair, delayed primary closure and longer-term aftercare e.g. antibiotic therapy or secondary wound surgical care (graft/tissue transfers)</p>
	<p>Assesses and provides mobility aids including occupational therapy intervention in the case of older/frail patients</p>
Behaviour- Communication & communications (in addition to CC7& CC8)	<p>Provides wound care management advice and information regarding removal of sutures/dressings at appropriate time (see also PP13)</p>
	<p>Offers appropriate routine musculoskeletal self-care advice e.g. Pain relief/Rest/Ice/Compression/Elevation (PRICE) guidance</p>
	<p>Arranges appropriate outpatient clinic/follow-up for review of fractures, dislocations or wounds</p>
Paediatric	<p>Is able to identify a 'pulled elbow' and its treatment</p>
	<p>Is able to identify fractures or other musculoskeletal injuries that may indicate non-accidental injury, particularly in association with age/developmental stage or historical inconsistency</p>
	<p>Appreciates radiological variations due to age (bony epiphyses, association with Salter-Harris fracture patterns)</p>
	<p>Is able to examine gait, posture and hip joints of all age groups and appropriate to developmental stage</p>
	<p>Understands the differential diagnosis of limp in a child</p>
	<p>Septic arthritis: Is able to suspect this in different age groups</p>

Additional optional competencies- EPA 1 to 2

Knowledge/ Skill/ Behaviour	Detail of competency
Skills	Aspiration of a large joint e.g. knee
	Management of a compartment syndrome; may involve observation of fasciotomy