

## **Instructions to Candidates:**

**You are a Foundation doctor in General Practice.**

**This patient has presented with right knee pain that occurred whilst playing football yesterday evening.**

**Please examine the patient. Tell the examiner what you are doing and what you find as you proceed.**

**At six minutes, the examiner will ask you questions.**

## **Station Information**

|                            |   |
|----------------------------|---|
| <b>Station Reference</b>   | PRIME-OSCE 2  |
| <b>Station Title</b>       | OSCE PRIME Training: Knee Examination                         |
| <b>Student Description</b> |   |
| <b>Author</b>              | Harish Thampy   |
| <b>Year Group</b>          | PRIME OSCE Training   |
| <b>Clinical Domain</b>     | Musculoskeletal Health  |
| <b>Clinical Competency</b> | Patient Assessment (Clinical Examination & Procedural Skills) |

## **Information for Site Organisers**

### **Type of patient required:**

Volunteer (Examination only).

### **Patient information:**

Volunteer patient willing to have legs exposed and knee examined. Should be wearing clothing that allows exposure eg trousers that easily roll up / skirt.

### **Resources and equipment needed:**

Tape measure

Alcogel - please place within easy reach of the candidate

Chairs x 2

Examination couch

### **Setting up the station:**

Please ensure there is enough space in the station to assess gait.

This station should be set up in the usual patient examination format: 2 chairs and examining couch or chair.

The candidate should be able to examine the patient from the patient's RIGHT side. The examiner's chair should be positioned so that he/she can observe both candidate and patient.

## **Information for the Examiner**

### **What is the overall aim of this station?**

This station tests the candidate's ability to conduct a knee examination in a confident and systematic manner and their applied knowledge relating to acute knee injuries.

### **Examiner's role:**

At 6 minutes ask the candidate

1. 'Please summarise your examination findings'
2. Show the X-ray and say 'Please describe this X-ray'.

### **What is expected of the candidate?**

#### **GENERAL:**

- Student introduces himself/herself, checks the patient's name and age
- Explains purpose of examination and obtains permission
- Follows a logical sequence of steps
- Performs the steps in a smooth, practised sequence
- Explains what is happening as they go along

#### **EXAMINATION:**

##### Look

- Inspect (from both in front and from the side on on weight-bearing) and comment on any abnormalities (including swelling, deformity, scars, skin changes, muscle wasting – they may wish to use the tape measure to assess the latter).

##### Feel

- Before laying hands on patient, enquires re pain
- Palpate (looking for tenderness, swelling, and warmth). Includes feeling behind the knee (popliteal fossa). Feels along joint line.
- Examine for an effusion.

##### Move

- Test active movement and (if active movement reduced) passive movement, comment on whether this provokes pain.
- Feel for crepitus during movement of the knee. Examine for instability (collateral, cruciate).

Examine standing and walking

Assess deformities.

Assess gait.

Effusions:

##### *1. Patella tap*

The student should slide their hand down the patients thigh, compressing the suprapatellar pouch which will force any fluid behind the patella. Using 2 -3 three fingers they should push down (not tap) on the patella. A positive test occurs when the patella is felt to 'tap' the femur behind and bounce back.

##### *2. Bulge/ripple/sweep test*

The student should ideally stroke the medial side of the knee upward the suprapatellar pouch to empty the medial compartment of fluid. They should then stroke down the lateral side. A positive test occurs when a bulge (or a ripple) appears back in the medial side

Collateral ligaments:

The student should test the medial and lateral collateral ligaments by applying a valgus (inward) stress then a varus (outward) stress respectively, firstly with the knee in full extension and then repeated with the knee in flexion of approximately 20 degrees. The should take care to stress the ligaments without causing the hip to rotate

Cruciate ligaments:

*Posterior*

With the knee flexed to 90 degrees the student should look from the side for posterior sag which is a subluxation or step back of the tibia indicating posterior cruciate ligament damage

*Anterior Draw Test:*

With the knee flexed to 90 degrees the students should grasp the upper tibia with both hands with the thumbs over the tibial tuberosity and the index fingers under the ham strings to make sure they are relaxed. The lower tibia should be stabilised with either the students forearm or more commonly by sitting on the patient's foot. They should then pull backwards on the upper tibia. A small degree of laxity is normal however a significant degree of movement indicates damage to the anterior cruciate ligament. Pushing forward on the tibia will also test the PCL.

**NOTE**

- The candidate should mention that they would compare both knees, although as time is an issue, please prompt them to move straight on with examination of the right knee.
- The candidate should mention they would examine the joint above and below though they do not need to do this given time constraints
- Meniscal tears may be examined using McMurray's test. There are many variations on McMurray's test - due to time constraints and variability it does not need to be performed as part of this examination.
- It is not necessary for the candidate to offer a chaperone for this station.

**Marking Guidance:**

**If you award a global judgement below 'Excellent', it is extremely important you provide constructive feedback on key areas the candidate should develop further i.e feedback which justifies the grade awarded.**

**The excellent (7)/ very good (6) candidate** will typically conduct a systematic examination in a confident and structured manner covering all expected steps. They will respect and attend to the comfort, safety and dignity of the patient. They will provide a clear accurate commentary of their findings as they proceed and answer the questions posed by the examiner correctly.

**The good (5)/ satisfactory (4) candidate** will typically examine most of the expected steps though may omit aspects. They may appear unstructured at times. Their commentary of findings may be unclear at times and they they may not be able to fully answer the examiner questions.

**The failing candidate (1, 2, 3)** will typically be flustered and disorganised in their approach to examining the patient. They will not attend to the comfort, safety and dignity of the patient. Their commentary as they proceed is likely to be disjointed and they will not be able to answer the examiner questions (though this latter point does not necessarily warrant a fail on its own).

**NOTE: If the candidate describes important signs that are clearly not present then cap their global mark at 3.**

**Clinical information relevant to the station:**

ACL injuries: patient may report hearing/ feeling a 'pop'. Rapid onset of knee swelling within hours (haemarthrosis). Positive findings on testing the ACL (Lachman's test, anterior drawer test, pivot shift test)

Meniscal injuries: swelling around knee appears some hours, or even days, after the injury. Patient may complain of locking of the knee. The knee may be held slightly flexed. Extension often limited (flexion not generally reduced). McMurray's or Apley's grinding test may be positive

## **Marking Domains**

### **01. Overall conduct of the consultation with patient/relative/carer**

- Introduces self, states own role and checks identity of patient/ relative/ carer
- Explains and agrees the purpose of consultation
- Establishes and maintains rapport
- Attends to the comfort, safety and dignity of the patient if applicable
- Demonstrates empathy and sensitivity
- Discusses patient information sensitively and with awareness of confidentiality if applicable
- Maintains a fluent, coherent and competent approach
- Manages time, completes task and closes appropriately
- Follows appropriate infection control measures throughout

### **05. Physical (Clinical) Examination Skills**

- Uses alcohol rub before and after examination and, when appropriate, uses gloves
- Explains the nature of examination
- Seeks consent to examine
- Offers/asks for chaperone where appropriate
- Guides the patient in positioning themselves appropriately
- Asks the patient if any areas to be palpated or moved are painful
- Uses a methodical, fluent and correct technique
- Examines, or suggests examining, all the relevant areas
- Correctly identifies clinical signs
- Attends to the comfort, safety and dignity of the patient throughout

### **07. Communicating to Patient Whilst Examining/ Undertaking a Procedure**

- Establishes what the patient knows about the task to be performed
- Explains each stage clearly
- Maintains appropriate body language and eye contact
- Explains medical jargon as required
- Responds to questions appropriately

### **13. Clinical Knowledge**

- Identifies the underlying problem(s)
- Demonstrates an appropriate depth of understanding of the clinical condition/pathology
- Applies clinical reasoning skills to interpret information in the clinical context
- Applies knowledge to the patient's current problem
- Comes to appropriate conclusion(s)

### **15. Providing information to the examiner**

- Communicates findings clearly, if applicable
- Summarises accurately and concisely if applicable
- Answers examiner questions clearly and competently
- Provides and prioritises answers that are reflective of routine clinical practice
- Justifies answers in context of the patient's problem