

# OSCE

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An Introduction

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**What is an  
Objective Structured Clinical Examination  
(OSCE)?**



**OSCE**

- Medical students are required to demonstrate:



Knowledge



Skills



Behaviours

as outlined within the medical school curriculum in order to meet the expectations.

- Medical schools need to be sure, through their assessments, that they are producing **safe** and **competent** clinicians who can perform on the first day as a foundation doctor.
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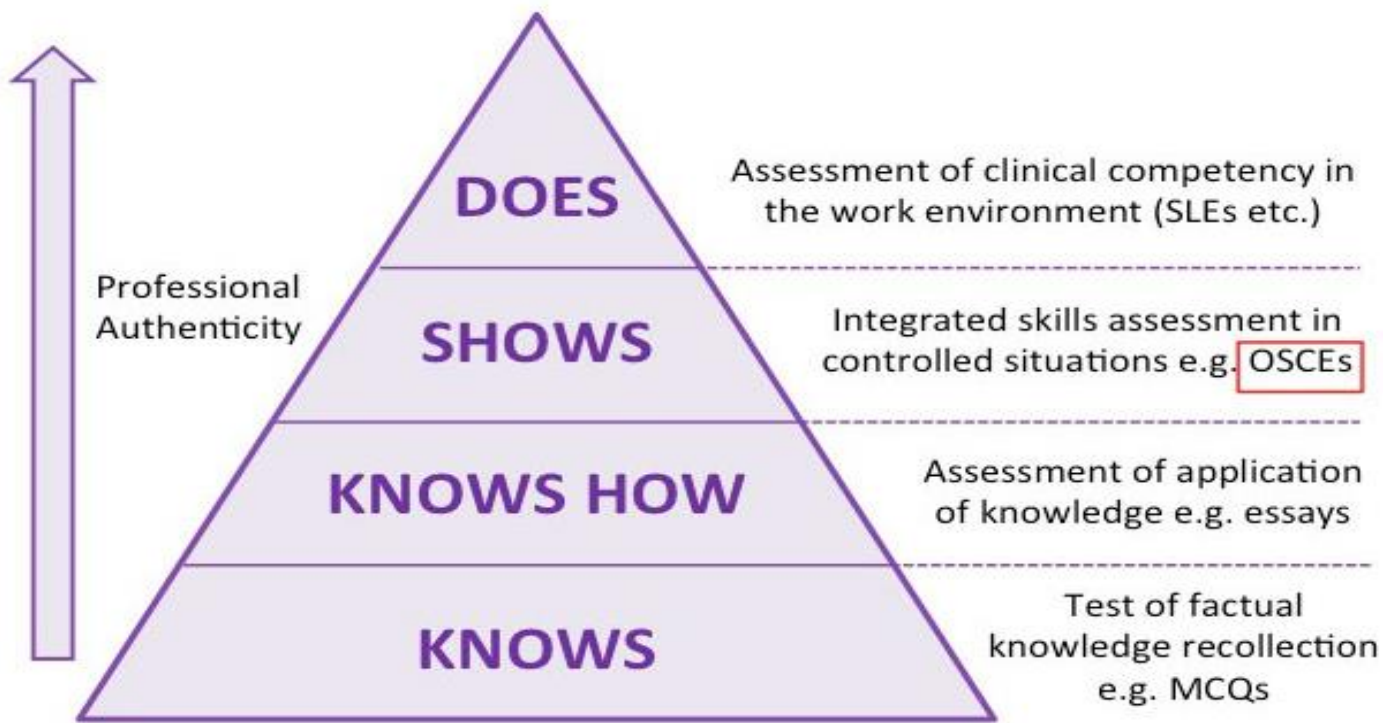


## Methods to assess clinical competency

- Long cases
  - OSLEs.
  - OSCEs
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## Why OSCE?

- It allows assessment at the 'Shows' level of Miller's pyramid
  - It uses stations that replicate real-life clinical practice.
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**Miller's Pyramid of Professional Competence with examples of assessment techniques used in medical education**  
*Source: adapted from Miller GE. Assessment of clinical skills/competence/performance. Acad Med 1990;9:63-7.*

## What to assess by OSCE?

- Basic clinical skills
  - Complex patient presentations
  - Inter-professional relationships and aspects of professionalism
  - Real-life clinical situations
  - Increasing the validity of the assessment.
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## OSCE Components

- Multiple clinical encounters (10-15 stations)
  - A variety of clinical tasks blueprinted to the MBChB curriculum
  - Multiple examiners
  - Standardized marking
  - Simulated and real patients
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**OSCEs:**  
**Reliability & Validity**

# The Reliability of OSCEs

It is a measure of how reproducible an assessment is

i.e. is the result consistent and free from error.

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# ***Reliability tools***

## **Multiple sampling**

- 10-15 stations covering a range of competency and clinical domains to judge whether a student is competent to progress.
  - Ensure that stations are of equivalence from day to day according to the.
  - Ensure that one day is not significantly more difficult than another.
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# ***Reliability tools***

## **Multiple trained examiners**

- No single examiner is 100% perfect, 100% of the time.
  - Use 10-15 different examiner judgements to assess a student's ability.
  - OSCE training: face-to-face , online videos and instructional documents.
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# ***Reliability tools***

## **Standardized simulations**

- Simulated patients undergo training to take on this role.
  - SPs also undergo calibration, meeting some weeks before each OSCE to rehearse their allocated case with the other SPs.
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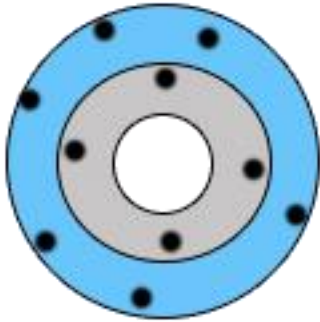
# ***Reliability tools***

## **Standardized instructions**

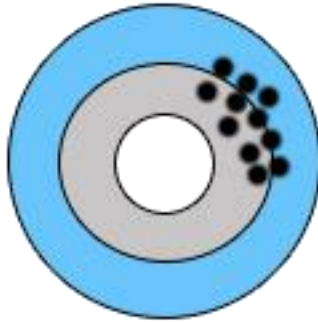
- Instructions are split into clear sections
  - Detailed examiner guidance to help them make standardized and appropriate judgements about the performance of each student.
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# The Validity of OSCEs

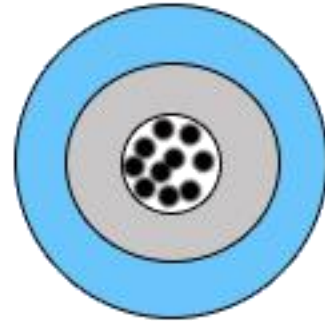
Validity refers to whether the assessment achieves what it sets out to measure.



Not reliable or valid



Reliable but not valid



Both reliable and valid

## ***Validity tools***

- Designing station tasks to reflect integrated skills and knowledge that are the foundations for good clinical practice.
  - Designing station tasks to reflect the real-life clinical work expected of Foundation doctors.
  - Mapping stations to a defined blueprint, as appropriate for each year of study.
  - Stations are written by an expert team.
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# The OSCE Examiner's Role



## ***The OSCE Examiner's Role***

Attentive at all times

Carefully observe the skills and behaviours of the candidates

Make sure the candidate's ID card

Make sure to fill in the correct Form Should not engage with the candidate and should remain neutral (but friendly) throughout

No coaching

Not confirming the diagnosis/ clinical signs with them

## ***The OSCE Examiner's Role***

### ***Candidates who you have met before:***

- Ensure consistency by marking them based on their performance in the station on the day, and not on their performance during their placement with you.
- If you believe that there may be a conflict of interest, then please let exam organizers know once the exam is completed.



# The Good Examiner



- Arrives on time for the examiner briefing
- Pays attention and noting any new changes to the process
- Is familiar with the marking domains, global ratings, and the station script.
- Examines the patient or SP (if present) to confirm any findings and Runs through the script
- Scores in accordance with marking guidance
- Keeps the mark sheet and any examiner-only resources out of sight from the candidate

**The  
Good  
Examiner**



- Avoids verbal or non-verbal prompting during the station
- Only asks the candidates questions mentioned in the station script and not any additional ones of their own
- Takes on a neutral but warm role and doesn't communicate with the candidate to confirm or refute a diagnosis
- Moves the candidate on to the next station promptly.
- Provides constructive free text feedback comments to help students improve
- Completes the post-OSCE station feedback evaluation form



**DO'S**



**DON'TS**

**DO**

- **Arrive at least 30 mins before the start of the OSCE**
  - **Make yourself familiar with the marking scheme for the particular station**
  - **Follow the station instructions and marking guidance. Do not deviate from this.**
  - **Take account of student adherence to dress code and infection control measures.**
  - **Keep to the timing for the station Be aware of your own body language gestures which may be distracting for the candidate – e.g. yawning; facial expressions**
  - **Alert the chief tutor of any significant issues you note in the station script**
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Take up time at the start of the station by excessively introducing yourself

Repeat the instructions already read by the candidate

Ask the candidate additional questions to those in the instructions or change the wording/order of the questions that are scripted

Give verbal or non-verbal cues such as nodding or saying 'good'

Give feedback to candidates on just what they did well

Show the candidate their mark at the station

Use a mobile phone whilst in the station

Ask candidate about how they did in other stations

Talk to the simulated patient in an inappropriate manner

Express an opinion to the simulated patient about how a candidate has done at the station

# STUDENTS



## Confidentiality statement

- Students must understand that some of material used on this OSCE will be used on subsequent exams.
  - Students must complete their own work and also not share any subject matter, test material or concepts with subsequent groups.
  - It is known that breach in confidentiality is a breach in professionalism.
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• **Students may not possess:**

- cellular telephones
- watches of any type
- Pagers
- personal digital assistants (PDAs)
- two-way communication devices
- notes or study materials of any kind at any time during the examination, including during breaks.

These items must be **stored** during the examination.

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- The student **cannot** discuss the cases with their fellow examinees, during breaks or at any time.
  - Students **should** wear comfortable, professional clothing and a white laboratory or clinic coat.
  - The **only** piece of medical equipment students may bring is an unenhanced standard stethoscope
  - Students who arrive late may **not be allowed** to take the exam
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# The OSCE Design Process: Quality Assurance



There are a significant number of robust steps that occur  
prior to, and after, each OSCE  
to ensure that all stations  
are of the highest quality possible  
and are realistic, valid, accurate and unambiguous.

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# OSCE Blueprints

- OSCE blueprints are grids that clearly set out to staff and students on one axis, the expected competencies that students need to demonstrate and along the other, the clinical domain in which this competency will be contextualized.
  - Every station in OSCE should be related to an appropriate competency domain and clinical domain.
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- Best is to design more integrated stations that combine skills across competency domains
  - For example stations that incorporate both data interpretation and sharing information, or history taking and prescribing.
  - These stations are more reflective of tasks associated with real clinical practice and therefore provide increase the validity and fidelity of the assessments.
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- When designing a 10-15 station OSCE, use the blueprint to ensure that we have sampled widely across the range of competency and clinical domains, creating a well balanced fair assessment.
  - Students are allowed able to know the year-specific blueprints which.
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# CHECKLISTS





**Checklist**

Action/response	Maximum	Actual
2/0 (3M) vicryl or 0 (2M) vicryl		
Apply 2 clamps beneath ovary abutting each other		
Apply one clamp above ovary		
1st throw placed neatly but not tightened		
Candidate asks for clamp to be released		
Throw is slid into crush		
2 more throws, the third may have 2 turns if the first had 1 turn		
Ends trimmed to approx 0.5cm (i.e. not too long to have much FB and not too short to allow for slippage)		
Two handed throw done in a fluid motion without hesitation indicating dexterity and practice		
<b>Marks (10 maximum)</b>	10	

**Checklist with marking scheme**

Action/response	Maximum	Actual
2/0 (3M) vicryl or 0 (2M) vicryl	1	
Apply 2 clamps beneath ovary abutting each other	1 ½	
Apply one clamp above ovary	½	
1st throw placed neatly but not tightened	1	
Candidate asks for clamp to be released	1	
Throw is slid into crush	1	
2 more throws, the third may have 2 turns if the first had 1 turn	1	
Ends trimmed to approx 0.5cm (i.e. not too long to have much FB and not too short to allow for slippage)	1	
Two handed throw done in a fluid motion without hesitation indicating dexterity and practice	2	
<b>Marks (10 maximum)</b>	10	

### Asthma Inhaler Techniques

Ask the patient to show you how they use their inhaler. Use these checklists to teach, check and/or confirm the way your patients with asthma use their inhalers. Assess inhaler technique at every opportunity.

#### Pressurized Metered-Dose Inhaler

Step/Task	Not Attempted	Attempted Inadequate	Attempted Adequate
1. Remove cap			
2. Check dose counter (if applicable)			
3. Hold inhaler upright and shake well			
4. Tilt the head slightly back			
5. Breathe out gently, away from the inhaler			
6. Put mouthpiece between teeth without biting and close lips to form good seal			
7. Start to breathe in slowly through mouth and, at the same time, press down firmly on canister			
8. Continue to breathe in slowly and deeply			
9. Hold breath for about 5 seconds or as long as comfortable			
10. While holding breath, remove inhaler from mouth			
11. Breathe out gently, away from the inhaler			
12. If an extra dose is needed, repeat steps 2 to 10			
13. Replace cap			
14. If the inhaler contains corticosteroid, rinse mouth			

**Initial Examination for Diabetic Patient**

Step/Task	Not Attempted	Attempted Inadequate	Attempted Adequate
<b>Introduction:</b> <ul style="list-style-type: none"> <li>- Introduce yourself to the patient</li> <li>- Confirm patient details – name / DOB</li> <li>- Explain the examination to the patient</li> <li>- Gain patient consent</li> <li>- Wash hands</li> </ul>			
<b>General Examination:</b> <ul style="list-style-type: none"> <li>- <b>General Appearance:</b> Describe patient general appearance</li> <li>- <b>Gait:</b> Comment on patient gait while walking</li> <li>- <b>Check Vital Signs and Measurements</b> <ul style="list-style-type: none"> <li>• Pulse ( rate and rhythm )</li> <li>• Blood Pressure ( sitting and standing )</li> <li>• Height, Weight and BMI</li> <li>• Waist circumference</li> </ul> </li> </ul>			
<b>Specific Examination:</b> <p><b>Skin Examination</b></p> <ul style="list-style-type: none"> <li>- Inspect sites for insulin injection ( Lipodystrophy, atrophy )</li> <li>- Look for signs of insulin resistance as acanthosis nigricans</li> <li>- Comment if you noticed any features of hair loss, granuloma annulaire, necrobiosis lipidica diabetorum or nail changes</li> </ul> <p><b>Head Examination:</b></p> <p><b>Face</b></p> <p>Comment if you noticed any features of endocrinopathies( Cushing, Hypothyroidism ), hydration and pigmentation</p> <p><b>Eyes</b></p> <ul style="list-style-type: none"> <li>➢ Comment if you noticed signs as xanthelasma or arcus senilis</li> <li>➢ Check pupil reaction</li> <li>➢ Check light reflex</li> <li>➢ Check visual Field</li> <li>➢ Check visual acuity</li> <li>➢ Check ocular movements</li> </ul>			

*Checklist for Back Examination*

STEP/TASK	Not Attempted	Attempted Inadequate	Attempted Adequate
<u>Opening Session</u> 1. Introduce yourself to the patient 2. Obtain permission to examine the patient 3. Explain examination details to the patient 4. Wash your hands			
<u>Patient Standing</u> Inspection: > Gait (patient without shoes) > Back for scoliosis, lordosis, swelling, masses, color, & scars.			
Palpation: Palpate the following landmarks: > Spine land marks: C7, T3 (scapular spine), T7 (inferior angle of scapula) & L4 (iliac bone). > Skin for hotness, tenderness (infection, fracture, ) & masses. > Muscle spasm. > Sacroiliac joints.			
Percussion: For deep tenderness			
Movement: > Toe-walk S1 > Heal - walk L5 > Squat & rise L4 > Movement: flexion, extenuation, lateral flexion.			
<u>Patient Sitting:</u> Inspection: scoliosis, muscle wasting.			
Movement: > Rotation			

CLERKSHIP – Case Name:

Student # (or Name):

## STANDARDIZED PATIENT CHECKLIST

N = no Y = yes E = excellent

Comments:

1		N	Y		
2		N	Y		
3		N	Y		
4		N	Y		
5		N	Y		
6	Student established rapport with me by listening attentively	N	Y	E	
7	Student showed genuine interest in me by being concerned and respectful	N	Y	E	
8	Student asked me to explain how this health issue today has affected my life	N	Y	E	
9	Student explained clearly (without medical jargon) what is happening with me medically	N	Y	E	
10	Student explained clearly (without medical jargon) what the next steps would be	N	Y	E	
11	Student provided information and content that was appropriate for me	N	Y	E	
12	Student asked specific questions to confirm my understanding of the findings	N	Y	E	
13	Student assessed my ability and/or willingness to carry out the next steps	N	Y	E	
14	Student demonstrated an understanding of the reason for my visit and any concerns I had	N	Y	E	
15	Student used statements of understanding and support to acknowledge my emotions	N	Y	E	



THANK  
YOU