



OSCE 3

Candidate Instructions

This is a **7-minute** station.

You are the consultant in an emergency department (ED).

A 25-year-old patient has been brought in by ambulance following a motor vehicle accident. Appropriate neck immobilisation is in place due to the patient reporting neck pain.

You decide to assess the patient to see if their cervical spine can be cleared clinically.

The patient is in a resuscitation room and has been assessed by your registrar and trauma team. The patient is haemodynamically stable and there are no other obvious injuries.

When prompted, you will demonstrate an examination to the examiners, on a normal subject.

The patient will NOT be in the room.

Your tasks are to:

- Outline to the examiner the focused assessment you would obtain to determine if the patient can have their cervical spine cleared clinically
- Outline and justify your approach to clearing the C-spine
- At **3 minutes** you will demonstrate on a normal subject (role-player) and explain to the examiner, the focused examination you would perform in response to the clinical information provided by the examiner

Note: The role-player has been immobilised using saline bags to represent cervical immobilisation as applied in your workplace.

This OSCE will assess the following domains:

- Medical Expertise – 80%
 - History (30%)
 - Examination relevant to cervical spine injury (50%)
- Prioritisation and Decision Making – 20%



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Examiner Instructions

This is a **7-minute** station. This station is in 2 parts with an examiner involved in the OSCE.

The candidate is required to outline the focused assessment they would take from a 25-year-old patient who has been a driver in a MVA to see if their cervical spine can be cleared clinically without imaging. They have been told that the patient has appropriate neck immobilisation in place (using saline bags) due to neck pain, is haemodynamically stable with no other obvious injuries. The candidate should outline the need to obtain relevant history from the patient about mechanism of injury, neck pain, neurological symptoms and past medical history.

Part 1 (0 – 3 mins)

“Hello. Could you please outline the information you would seek on assessment to potentially clear this patient’s C-spine and give your rationale?”

If the Candidate spontaneously raises a topic area but does not provide adequate detail then the Examiner should probe appropriately:

E.g. ***“What details of the mechanism/ symptoms/ neck pain would you like to know?”***

This is a ‘core topic’ and candidates should not be provided with any ‘prompts’ for omissions of significant topic areas.

They are expected to explain/justify their approach to clearing the C-spine. The candidate should establish GCS (of 15) and demonstrate understanding of the use of NEXUS criteria +/- Canadian c-spine rules in clinical clearance of the c-spine.

Part 2 (3 – 7 mins)

“The patient has complained of neurological symptoms in their upper limbs. Can you demonstrate the focused examination you would perform to detect and define any relevant deficit? Please explain as you go.”

The aim is to assess clinical examination skills + underlying neurological knowledge. Thus, the candidates are expected to demonstrate a competent examination that would detect any relevant neurological deficit if present AND to explain the dermatomes/ myotomes they are assessing to an acceptable level.

Note: It is important for Examiners in different rooms to be consistent in degree of examination which is required for ‘completion’ e.g.: demonstration vs description/ both sides etc. (see general Examination Station Advice for Examiners document). As there is limited time, it would seem that doing full sensation testing in all dermatomes for light touch and pinprick (if that is desired) is not a good use of time. Would suggest that if candidates have demonstrated dermatomal knowledge with



*one sensory domain that they are moved on once have tested/ explained what they are doing in one dermatome of the other modality. **See comments in Equipment list.***

They have 4 minutes to complete their examination. It is expected that they should be able to complete an appropriate upper-limb examination at this time.

At the 6-minute mark ask:

“What else would you like to examine and why?”

Enables Candidates to outline any component of their exam that they will not complete in the time.
E.g.: lower limbs



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Examiner Script Summary

Part 1 (0 – 3 mins)

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“What details of the mechanism/ symptoms/ neck pain would you like to know?”

Part 2 (3 – 7 mins)

“The patient has complained of neurological symptoms in their upper limbs. Can you demonstrate the focused examination you would perform to detect and define any relevant deficit? Please explain as you go.”

At the 6-minute mark ask:

“What else would you like to examine and why?”



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Role-player Instructions

Role-player requirements

- **Gender:** Male
- **Age range:** 20-35
- **Role to be played by:** Medical Student

You are to represent a 25-year-old brought in after a low speed motor vehicle accident. Your neck has been immobilised using saline bags and you will be lying on a bed. You are quite comfortable. You are normal and have NO symptoms. **You do not need to speak to the candidate.**

The OSCE has 2 parts.

Part 1 (0 – 3 mins)

The candidate will interact with the examiner regarding the history about your accident and how/why they might be able to 'clear your neck' without using imaging.

Part 2 (3 – 7 mins)

The candidate will demonstrate and explain (using you) how they would examine a patient who had neurological symptoms (tingling or weakness) in their upper limbs.

Everything they test is normal, please do whatever they ask you to. Please try to be a 'new patient' each time so that they have to instruct you in each movement to perform. It is a challenge to not 'become the perfect patient' over time and perform movements before they ask you to – this is not ideal. We wish to assess their ability to get you to cooperate with an efficient examination in limited time.



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Props list

- Bed for patient
- 2 x bags saline for neck immobilisation
- Tendon hammer
- Cotton wool



CONFIDENTIAL Examiner Rating: OSCE 3

CANDIDATE
barcode

EXAMINER
barcode

Domain	Criteria	Marking rules to be 'at a minimum level of competence'/other comment	Criteria met / not met
Medical Expertise: History (30%)	Focused Assessment: - Mechanism of injury to exclude high risk features: speed of accident (< 100 kph)/ confirms simple rear-end/ restrained with a seatbelt/ Airbags deployed - Symptoms: ambulant at the scene/ presence of neck pain + immediate vs delayed +/- midline vs lateral/ neurological symptoms at scene and now/presence of other injuries - Enquiries about the ingestion drugs and alcohol. - Establish GCS 15: Asks re LOC/recall + orientation (person/place/time) PMHx: prior cervical surgery/ ankylosing spondylitis etc. Aim to establish no NEXUS criteria present- no midline tenderness/ normal level of consciousness/ no distracting injury/no focal neurological deficit/ no intoxication	Outlines relevant history to enable clinical clearance c-spine (to allow use of the NEXUS +/- Canadian c-spine rules) – Must cover below: - Mechanism: must confirm 2 of following 3: 1) low velocity (< 100 kph) 2) Simple rear end 3) Seatbelt or airbags - Symptoms/ patient activity: 1) Presence of neurological symptoms (paraesthesia at minimum) 2) neck pain details – onset or location History must establish absence of high-risk features: - NEXUS: Confirms lack of ingestion/ intoxication + no distracting injury. And/or: - CCS: 1) Confirms MVA < 100 kph + lack of paraesthesia 2) Confirms low risk: Simple rear end collision <i>Candidates may mix some criteria, must get adequate information to proceed</i>	
Medical Expertise: Examination (50%)	Examination: (Note variation – e.g. QLD uses soft collar for ALL patients pre-hospital) - examines specifically for midline tenderness - maintains midline neck position during examination (by instruction or otherwise) Pragmatic structured neurological exam – upper and lower limbs: - Exam for power in UL: Shoulder Abd (C5)/Add (C6-7), Elbow Flex (C5/6)/Ext (C7), wrist flex(C6/7)/ext (C7/8), finger flex/grip (C7/C8), finger ext (C8), finger abd (T1) Competent testing (not identification) required for at standard. - Examine sensation upper limb: Tests all dermatomes – lat shoulder (C5)/ lateral forearm or thumb (C6)/ middle finger (C7)/ little finger or medial hand (C8)/ medial forearm/arm (T1) - Lower limb – screening exam: Some assessment of power/sensation lower limbs (or verbal description at 6 min prompt) - Reflexes. Proprioceptive testing. - Perianal sensation/ rectal exam not required in absence of significant deficit. Indicate intent to do log roll to exclude other spinal tenderness. States would examine for other injuries with examples .	1. Midline tenderness Neurological examination to identify and define neurological deficit: - ULimb motor – tests power in minimum 6 groups: shoulder abd (C5) AND elbow flex (C5/6) + ext (C7) AND 1 wrist movement AND finger flex (C7/8) or ext (C8) AND finger abduction (T1) (<i>all required</i>) AND identifies a correct myotome for minimum of 4 - UL sensation – tests and identifies sensation in dermatomes C5/C6/C7/C8/T1 (<i>minimum 4 correct required</i>) with assessment of light touch and pain (pin prick) - Some motor and sensory testing of Lower Limb (or verbal description).	

Prioritisation & Decision Making: (20%)	Must outline need to examine for 1) Midline tenderness (if using NEXUS) or 2) Cervical ROM (CCSR) – no issue if do both. Organised and clear explanation utilising the NEXUS criteria or Canadian c-spine rules to justify when c-spine can be cleared clinically: • NEXUS – no imaging necessary if < age 60 and ALL 5 of 1) Absence of posterior midline cervical tenderness 2) Normal level alertness 3) No evidence of intoxication 4) No abnormal neurological findings 5) No painful distracting injuries • CCS: May avoid imaging if fulfil 3 step process 1) Absence of high risk features: Age > 65// Dangerous mech – fall > 3m or 5 stairs, axial load head, MVA > 100kph, motorized rec vehicle, ejection from a vehicle, bicycle vs immobile object// paraesthesia in extremities AND 2) presence of at least 1 low risk feature – simple rear-end MVA, sitting in ED, ambulatory at any time, delayed onset neck pain, absence midline neck tenderness THEN 3) Active neck ROM to 45 degrees bilat.	• Outlines need to assess for midline tenderness and /or cervical ROM as part of decision-making. • Able to articulate rationale for c-spine clearance uses an appropriate decision rule (<i>must incorporate minimum dataset of NEXUS or CCSR, may use hybrid e.g. NEXUS + neck movement</i>)	
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