



CLINICAL PROCEDURAL SKILLS

ECG RECORDING

TUTOR NOTES

Duration of Session

45 Minutes

Prior Knowledge

No prior knowledge is assumed. Students will have received the Recording an ECG clinical procedural skills guidance document.

Learning Objectives

- Demonstrate how to perform a 3 lead ECG
- Demonstrate how to perform a 12 lead ECG
- Understand the indications for performing an ECG
- Identify the equipment required to perform an ECG
- Demonstrate the accurate documentation relating to performing an ECG

Equipment Required

- Recording a 3-lead ECG flashcard
- Recording a 12-lead ECG flashcard
- Recording an ECG tutor notes
- ECG Machine
- Examination couch/bed
- Adhesive ECG tabs
- Volunteer Patient (student)

Session Plan

This session plan is for guidance purposes only

The emphasis of each section of the session should be to allow students the maximum time possible to practice the skill.

The flashcards included in these notes will be available as hard copies in the clinical procedural skill station.

5 minutes- Explain indications and usefulness of the skill.
Discuss indications for recording an ECG.

10 minutes- Tutor demonstrates the skill

25 minutes- Students practice the skill.

5 minutes- Summary and opportunity for questions

It is suggested to use a four-stage approach to demonstrate the skill.

- | | |
|---------------------|--|
| Stage One: | Tutor Demonstrates the Skill in “real time” |
| Stage Two: | Tutor talks through the component parts of the skills whilst demonstrating again |
| Stage Three: | A student talks through the skill as the tutor demonstrates for a third time |
| Stage Four: | Students Practice the Skill |



CLINICAL PROCEDURAL SKILLS

RECORDING AN 3-LEAD ECG

PRE PROCEDURE

Introduce self, explain procedure and obtain consent from patient.

Perform appropriate hand hygiene and don PPE according to local protocol.

Position the patient comfortably at an angle of 45° if possible.

Ensure that there is a gown or blanket to minimise exposure. OFFER A CHAPERONE.

A 3-lead ECG is typically used for continuous cardiac monitoring.

PROCEDURE

Expose the patient's anterior chest wall for the minimum period of time possible.

It may be necessary to shave a small area to maximise adhesiveness of the ECG tab. If this is the case, gain consent from the patient. Patients with significant breast tissue may require this to be displaced to adhere ECG tabs to the anterior chest wall.

ECG tab placement:

- **RED**- RIGHT ARM- Just under the RIGHT clavicle
- **YELLOW**- LEFT ARM- Just under the LEFT clavicle
- **GREEN**- LEFT LEG- lower chest to the LEFT of the umbilicus

Attach the leads inferiorly to the ECG tab thereby minimising the tension and lessening the likelihood of the tab becoming detached.

When all leads are attached, ask the patient to remain as still as possible.

Turn on the cardiac monitor and select the appropriate lead according to local procedures and protocols.

POST PROCEDURE

Patients usually remain attached to a 3-lead ECG for a period of time.

Explain to the patient they will remain attached to the monitor and to seek assistance if they require to be unattached.

Thank the patient and ensure their comfort.



CLINICAL PROCEDURAL SKILLS

RECORDING AN 12 LEAD ECG

PRE PROCEDURE

Introduce self, explain procedure and obtain consent from patient.

Perform appropriate hand hygiene and don PPE according to local protocol.

Position the patient comfortably at an angle of 45°.

Ensure that there is a gown or blanket to minimise exposure. OFFER A CHAPERONE.

Bring the ECG machine to the patient, turn it on and ensure it has adequate battery charge for the procedure.

Enter the patient's demographic details into the ECG machine (Name, Date of Birth and Patient Identifier).

PROCEDURE

Expose the patient's anterior chest wall for the minimum period of time possible.

It may be necessary to shave a small area to maximise adhesiveness of the ECG tab. If this is the case, gain consent from the patient. Patients with significant breast tissue may require this to be displaced to adhere ECG tabs to the anterior chest wall.

CHEST TAB PLACEMENT

- V1- FOURTH intercostal space- RIGHT sternal edge
- V2- FOURTH intercostal space- LEFT sternal edge
- V3- Between V2 and V4
- V4- FIFTH intercostal space- mid-clavicular line
- V5- FIFTH intercostal space- anterior axillary line
- V6- FIFTH intercostal space- mid-axillary line

LIMB TAB PLACEMENT

- RED- Right upper limb- ulnar styloid
- YELLOW- LEFT upper limb- ulnar styloid
- GREEN- LEFT lower limb- lateral maeollus
- BLACK- RIGHT lower limb- lateral maeollus

Attach the leads inferiorly to the ECG tab thereby minimising the tension and lessening the likelihood of the tab becoming detached.

When all leads are attached, ask the patient to remain as still as possible.

When the trace on the ECG machine is stable, press the button to record the ECG.

POST PROCEDURE

Thank the patient and explain the procedure is over.

Detach the leads and gently remove the ECG tabs from the patient.

Perform hand hygiene and dispose of PPE in accordance with local policy.

Ensure the ECG has been reviewed and is then added to the relevant patient's notes.

Return the ECG machine to it station and ensure it is reconnected to the main supply.