NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CHS422

COURSE TITLE: CLINICAL SKILLS II

COURSE GUIDE

CHS422
CLINICAL SKILLS II

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Introduction

Clinical skills are a core component of the study of B. Sc. Community Health.

Clinical skills expose students to techniques and clinical procedures that are necessary in achieving minimum standards for patient care, treatment and management. It is a three- credit unit course for second year students.

Over the years, clinical skills have been counted among the subjects necessary for the study of Nursing Science and Medicine. However, it has different approaches, limitations and applications in the study of B. Sc. Community Health.

That is why it is normally divided into three parts (clinical skills I, II and III) in the study of B.Sc. Community Health.

What you will Learn in this Course

The course consists of Modules, Units and a Course Guide. The course guide tells you briefly what the course is about and what course materials you will be using.

There will be regular tutorials for the course. It is advisable that you attend these tutorial sessions. The course will prepare you for the challenges you will meet in the field in terms of skills acquisition and applications in the management of patients in hospitals and community setting.

Course Aims

The course aims to provide you with an understanding of clinical skills focusing on the approaches and techniques needed to manage patients condition.

Course Objectives

The course has set objectives. Each unit has specific objectives which are mentioned at the beginning of the unit.

You should read these objectives before you study the unit and you may wish to refer to them during your study to check on your progress. You should always look at the unit objectives after the completion of each unit.
On completion of this course, you should be able to:

- explain clinical procedures in managing patients' condition.
- apply techniques and use of sterile materials in the management. of patients
- manage patients' condition and minimise further complication.

Working through this Course

To complete this course, you are to read each study unit, text books and other materials which may be provided by the National Open University of Nigeria. You would also be required to do hospital attachment for practicals.

Modules and Study Units

The course has 20 study units arranged in four modules as follows:

Module 1 Simple Clinical Procedures

Unit 1 Administration of Injection
Unit 2 Drip-Setting
Unit 3 Use of Diagnostic Set
Unit 4 Catheterisation
Unit 5 Oral Hygiene

Module 2 Assessment for Clinical Diagnosis

Unit 1 Female Breast Self- Examination
Unit 2 Body –Assessment of Dehydration
Unit 3 Measurement of Weight to Assess Nutritional Status of Individuals
Unit 4 Measurement of Height and Length of a Child
Unit 5 Mid-Arm Circumference Measurement
Unit 6 Eye – Visual Acuity Test

Module 3 Procedures for Simple Minor Surgery

Unit 1 Wound- Dressing
Unit 2 Suturing of Wound
Unit 3 Male Circumcision
Unit 4 Episiotomy
Unit 5 Ear- Piercing

Module 4 Simple Laboratory Investigation

Unit 1 Collection of Urine Specimen
Unit 2 Urine Test for Sugar and Protein
Unit 3 Sahli Method of Haemoglobin Estimation
Unit 4 Tallquist Method of Haemoglobin Estimation

Module 1 Units 1-5 focus on the application of simple clinical procedures for Administration of Injection, Drip Setting, Use of Diagnostic Set, Catheterisation and Oral Hygiene.

Module 2 Units 1-6 deal with the assessment for clinical diagnosis in areas of Nutritional Assessment, Visual Acuity, Breast Self-Examination and Assessment of Dehydration.

Module 3 Units 1- 5, explain the procedures for simple minor surgery in areas of Wound- Dressing, Suturing of Wound, Male Circumcision, Ear-Piercing and Episiotomy.

Module 4 Units 1- 4 focus on the simple techniques to apply and conduct in routine laboratory investigation of blood and urine specimen. It covers investigation on samples of blood for haemoglobin estimation and samples of urine for protein and sugar test.

This course entails that you spend a lot of time to read and practise skills. I would advise that after the study of each unit, you visit a health facility/hospital to acquaint yourself with the requisite skills.

The course should take you about 20 weeks to complete. At the end, there would be an examination.

However, each study unit consist of one or two weeks work, the session plans include an introduction, objectives, content and reading materials, self assessment exercise, conclusion, summary, tutor- marked assignments, references and further reading. The unit directs you to work through/reading and practice the exercises related to the required content. In general, these are meant to test you on the material content you have just covered and require you to apply it in the most practical way and thereby assist you to evaluate your progress and your comprehension of the course. Together with tutor-marked assignments, these exercises will help you to achieve the stated learning objectives of the individual units and of the course as a whole.

Presentation Schedule

It is important to note that, every study unit has stipulated date and period of tutorials, practical attachment and submission of tutor- marked assignment. You should work and study within the stipulated time frame and guard against falling behind in your work.

Assignment File

There are three aspects to the assessment of the course. The first is made up of self assessment /practice exercises. Second, Tutor -Marked Assignment and third, is the written examination/end of course examination.

At the end of each study unit, you should visit a hospital nearby for practicals, your facilitators will introduce you to the study materials useful for self assessment and regular practicals to enable you acquire basic knowledge and techniques in this course.

Tutor-Marked Assignment

The TMA is a continuous assessment component of your course. It accounts for 30% of the total score. You will be given four (4) TMAs to answer. Three of these must be answered before you are allowed to sit for the end of course examination. The TMAs would be given to you by your facilitator and returned after you have done the assignment. Assignment questions for the units in this course are contained in the assignment file. You will be able to complete your assignment from the information and material contained in your reading, references and study units. However, it is desirable in all degree level of education to demonstrate that you read and researched more into your references, which will give you a wider view point and may provide you with a deeper understanding of the subject.

Make sure that each assignment reaches your facilitators on or before the deadline given in the presentation schedule and assignment file. If for any reason you cannot complete your work on time, contact your facilitator before the assignment is due to discuss the possibility of an extension. Extension will not be granted after the due date unless there are exceptional circumstances.

Final Examination and Grading

The end of course examination for **Clinical Skills II** will be for about 3 hours and it has a value of 70% of the total course work. The examination will consist of questions, which will reflect the exercise and tutor-marked assignment problems you have previously encountered. All areas of the course will be assessed.

Use your time between finishing the last unit and sitting for the examination to revise the whole course. You might find it useful to review your practicals, TMAs and comment on them before the examination. The end of course examination covers information from all parts of the course.

Course Marking Scheme

Assignment	Marks
Assignment 1 – 4	Four assignments, best three marks of the four count at 10% each – 30% of course marks.
End of course examination	70% of overall marks.
Total	100% of course materials.

Facilitation/Tutors and Tutorials

There are 24 hours of tutorials provided in support of this course. You will be notified of the dates, time and location for these tutorials as well as the name and phone number of your facilitator, as soon as you are allocated a tutorial group.

Your facilitator will mark and comment on your assignments and practicals. Keep a close watch on your progress and any difficulties you might face and provide assistance to you during the course. You are expected to mail your Tutor-Marked Assignment to your facilitator before the scheduled date (at least two working days are required). They will be marked by your facilitator and returned to you as soon as possible.

Do not delay to contact your facilitator by telephone or e-mail if you need any assistance.

The following might be circumstances in which you would find assistance necessary, you would have to contact your facilitator if:

- You do not understand any part of the study of the assigned readings.
- You have difficulty with the self tests (Practice Exercise).
- You have a question or problem with an assignment or with the grading of an assignment.

Summary

You should endeavour to attend the tutorials. This would afford you an opportunity to have face to face contact with your course facilitators and

to ask questions which are answered instantly. You can raise any problem encountered in the course of your study.

This course is a study unit of clinical skills. But tutorials and practical clinical skills – will be covered only by a practical attachment in hospital.

To gain more benefits from the course tutorials, please prepare a list of questions before attending them. You will learn a lot from participating actively in discussions.

I wish you success in the course and I hope that you will find it both interesting and useful.

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CONTENTS PAGE

MODULE 1 SIMPLE CLINICAL PROCEDURES

UNIT 1 ADMINISTRATION OF INJECTION

CONTENTS

1.0 INTRODUCTION

This module entitled **Simple Clinical Procedures** is made up of five units. This unit will discuss simple procedures on how to administer injection as indicated in the unit objectives below.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- mention the routes of injection
- set tray for injection
- select sites for injection.

3.0 MAIN CONTENT

3.1 Overview of Administration of Injection

This gives an insight into the administration of injection as a simple clinical procedure for introducing drugs into to the body by the use of

syringe and needle. It is usually done manually by a medical practitioner in a hospital setting, nursing home/centre and health units.

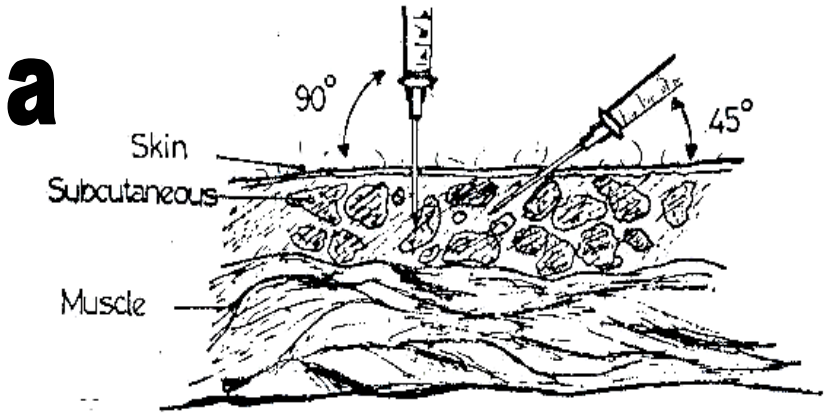
The standard route for giving injection and technique to apply in the process involved are as stated below;

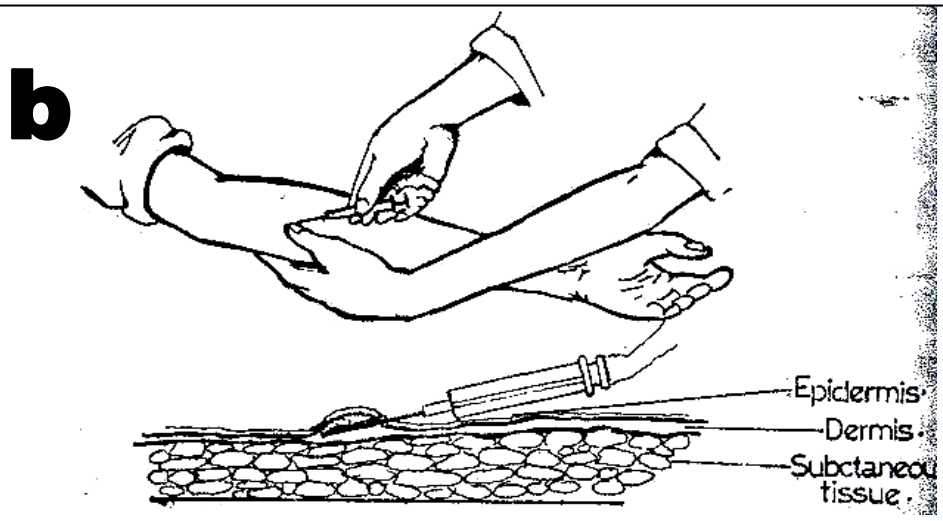
3.2 Routes of Injection

- **Intramuscular** – injection through the muscles, at angle of 90(degrees) deeply.
- **Intravenous –** injection through the blood vein
- **Subcutaneous** – injection through the subcut layer at **angle of 4**5(degrees)

3.3 Sites for Injection

- **Buttocks -** upper outer quadrate
- **Thigh –** upper outer muscle
- **Vein-**inside the vessel
- **Arm-**upper outer muscle





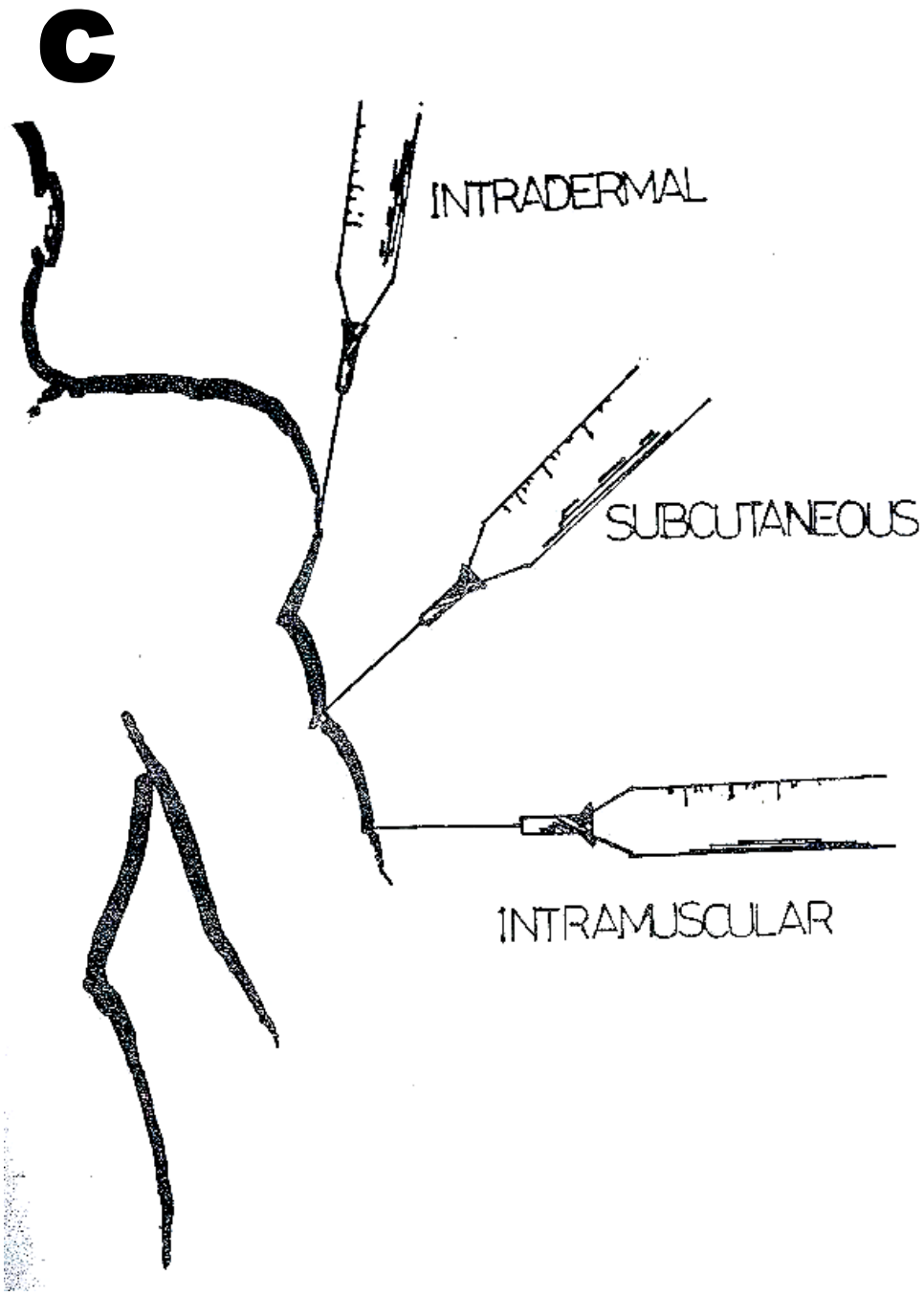


Fig.1.1: Diagram of Injection Sites
(Modified from CHO Training Curriculum)

3.4 Injection Tray

Before you start the procedure of injection, all the items needed should be assembled in a tray or trolley and these should include:

- Kidney dish with lid, containing sterile needle and syringes.
- A Galli pot with swabs
- Methylated spirit

- Kidney dish for used swabs
- Kidney dish with a pair of forceps
- Container with drugs / injection vials and ampoules

3.5 Procedures for Injection

These are steps you should follow in giving injection:

- explain procedure to the patient / client
- select and clean the site which can be the arm, thigh, buttock or vein
- read the label on the drugs for the expiry date before using it.
- use a syringe to draw drugs to the correct amount and expel the air bubbles
- insert the needle at an angle of 45 if its subcut routes at angle 90 deeply into the muscle's intra muscular route.
- draw the plunger to make sure you are not in a blood vessel (artery or vein)
- insert your drug
- remove your needle and wipe the site with the swab.
- for subcutaneous injection repeat the same procedure above except for intravenous injection, then you do the following:

- pierce the skin obliquely until the needle has gone in about a half to one inch and blood can be seen at the tip of the syringe
- draw blood a little and inject the prescribed drug
- apply puncture with little pressure to the site until bleeding stops.

4.0 CONCLUSION

In this unit, you read that administration of injection is done manually using syringe and needle. You are to visit a hospital and apply the procedure of injection under the supervision of a qualified personnel or medical practitioner.

5.0 SUMMARY

This unit gave an overview of the administration of injection, route of injection and step by step clinical procedure for drugs administration with the use of syringe and needle. Unit 2 will build on the administration of injection using infusion line drip set.

6.0 TUTOR-MARKED ASSIGNMENT

You should visit a hospital or clinic nearby, and do the following under the supervision of your tutor/facilitator:

1. physically examine and assemble the required content of injection tray.
2. practically administer injection following the procedures listed above.
3. examine the types of syringe and needle by their sizes and calibration in a hospital setting.
4. from your practical experience identify at least four common trouble shooting experienced with the application of procedure on administration of injection.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

Skeet & Muriel (eds.) (1984). *First Aid* for *Community Health Workers in Developing Countries*.

Kings & Mourice (eds.)(1984). Primary Child Care,Vol. 2.

UNIT 2 DRIP-SETTING

CONTENTS

1.0 INTRODUCTION

In the previous unit, the administration of injection was covered and this unit is an aspect of it, because setting of drip is a line of intravenous infusion of fluid or drugs which has similar procedures with giving injection. However, it differs only in principle and instructions.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- assemble the materials needed for setting drips
- set drips.

3.0 MAIN CONTENT

3.1 Overview of Drip -Setting

Drip -setting is a simple clinical procedure for the administration of fluid, water and electrolyte, including drugs (injectable via veins) into human body to modify action. The setting of drips involves three sequential processes. These are: fixing of electrolyte fluid to the given set tube, then attaching the set to the human body through blood vessel, timing and setting of flow rate of the fluid in the drip.

3.2 Materials for Drip -Setting

- Tray
- Kidney dish containing sterile needles and syringes
- Galli pot with spirit swabs

- Kidney dish for used swabs
- Tourniquet

NB: An intravenous given set containing needle tubing and a drop counter (is supplied in a complete set).

- Plaster or adhesive strapping
- A drip stand

3.3 Procedures for Setting a Drip (Intravenous line of infusion)

- Set a tray containing all the materials needed for drip –setting.
- Obtain a drip stand and place it closer to the patient/client (stand should be at least 45cm (18inches) in height (Above the veins, site- patient's bed)
- Select the site/vein with the swab
- Assemble the tubing solution according to the manufacturer's instruction
- Let out the air from the tubing by letting some of the fluids run down the tubing.
- Tie a tourniquet tight above the site where the veins will be pierced or hold the skin above the site tight to make the veins prominent/visible
- Pierce the skin obliquely until the needle has gone about one inch, and is in the veins (this occurs when there is a slow, but free movement of blood back into the tube attached to the needle)
- Release the tourniquet
- Fix the needle in place with adhesion strapping
- Hang the bag at the correct height so that the fluid is dropping according to the prescribed rate per minute.
- Check regularly to see that the fluid is dropping and that fluid is going in to the vein properly and that the puncture site is not swollen.

4.0 CONCLUSION

This unit has elaborated on the steps to follow in setting drips, you are required to assemble the materials needed and applied in setting the line process.

5.0 SUMMARY

You recall the steps, procedures and materials needed for setting of drip were extensively discussed in this unit. However, regular application of

these procedures in a hospital setting will not only make you to acquire the skills, but to have adequate experience in setting infusion line.

6.0 TUTOR-MARKED ASSIGNMENT

You are advised to visit a hospital nearby and physically see, examine and perform the following:

1. Assemble the materials needed for setting drips.
2. Set drip on a patient/client under the supervision of your tutor/facilitator or an experienced nurse/ health worker in a hospital setting.
3. Describe what you experienced as trouble shooting in the setting of drip for the following categories of persons:

(a) old person (50yrs)
(b) plump infant child (1yr)
(c) slim young lady(18yrs).

4. List the materials needed for setting drips.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical skills for Community Health Workers. Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

Skeet & Muriel (eds.) (1984), *First Aid for Community Health Workers in Developing Countries*. Kings & Mourice (eds.) (1984), Primary Child Care,Vol. 2.

UNIT 3 USE OF DIAGNOSTIC SET

CONTENTS

1.0 INTRODUCTION

Use of diagnostic set is a procedure that will be covered in this unit, but it is limited to few procedures because most of the uses of the diagnostic set were treated under another module as an independent unit (Ear, nose and throat).

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- identify the contents of a diagnostic set
- physically use an endoscope.

3.0 MAIN CONTENT

3.1 Overview of Diagnostic set

A diagnostic set is a kit containing single metallic pedal touch with different sizes of apparatus arranged for clinical examination, it is usually used for examination of internal parts like the ear, nose, mouth and eye.

3.2 Contents of Diagnostic Set

- Speculum of smaller and big sizes for ear and nose viewing
- Pedal touch with adaptor head (auroscope)
- Spatula-metal with adaptor for throat/tongue explosive
- Eye lens with adaptor for viewing of eye
- Battery (dry cell)
- Revolving socket

3.3 Procedure for using Diagnostic Set (auroscope)

- Check auroscope to ensure light is bright and speculum clean
- Choose the right size of adaptor to fix on the auroscope touch
- Choose and fix right adaptor for examination, (speculum, eye lens, or spatula)

4.0 CONCLUSION

This unit has dealt with the uses of a diagnostic set. It is an instrument that cannot be found in every hospital, unless you search for it and use it to improve your skills and knowledge.

5.0 SUMMARY

You recall that the procedures and materials needed for the use of diagnostic set has been explained. However, the application of these procedures requires patience and composure to avoid error and wrong result.

6.0 TUTOR-MARKED ASSIGNMENT

You are advised to visit a hospital and physically see, examine and perform the following:

1. Examine Ear and Tongue with a diagnostic set.
2. Identify two situations that require the use of a diagnostic set.
3. List the contents/parts of a diagnostic set.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session plans on Clinical skills for Community Health Workers, Nigeria.

Skeet & Muriel (eds.) (1984). *First Aid for Community Health Workers in Developing* Countries.

UNIT 4 CATHETERISATION

CONTENTS

1.0 INTRODUCTION

This unit explains the simple application procedures for draining urine from the bladder. It is like other sterile procedures, which require you to be attentive and composed while performing the skill.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- assemble the equipment for catheterisation
- perform the procedures for catheterisation.

3.0 MAIN CONTENT

3.1 Overview of Catheterisation

This is a process that involves simple procedures to drain urine out from the bladder using sterilised equipment. This procedure can be applied to both sexes, but there are particular steps to follow for infants.

3.2 Equipment for Catheterisation

- Infant urine bag (sealed polythene bag)
- Kidney dish
- Bowl with swabs
- Disinfectant e.g. savlon
- Sterile catheter in bowl with lid
- A bowl containing water (to clean baby’s genital area)

3.3 Procedures for Catheterisation

For children (infant): infant bag urine collection

- Explain procedures to mother
- Clean the site of urethral opening
- For male child, insert the penis into the hole in the polythene bag to make sure the urine gets straight into the bag.
- For female child, try to ensure that urethral opening is at the centre of the bag opening.
- Ensure that adhesive on the bag grips the skin well enough
- Remove the bag immediately the child has urinated to prevent spilling and contamination
- Wash hands after the procedures

For: Female

- Wash hand before starting the procedure
- Explain the procedure to the patient
- Clean the vulva
- Swab the vulva from in , up downward direction
- Use your left hand with your thumb and first finger to open the vulva properly
- Insert the catheter and pass it gently through the urethral opening to get out urine
- Collect the urine with a sterile kidney dish
- Remove the catheter and place in the receiver
- Clean the patient and reassured her
- Wash the catheter and other equipment

4.0 CONCLUSION

Catheterisation is a simple procedure, but you need to be at a bed site in a nursing home or hospital to acquire experience in performing the skill. The procedure requires privacy and confidentiality of patients.

5.0 SUMMARY

Catheterisation is aimed at expelling urine from the bladder and relieves pain using simple procedure. Procedure for catheterisation of infant is not the same with that for a female, but both require the same equipment with slight difference in application of the catheter.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the procedures for catheterisation of a baby girl.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

Skeet & Muriel (eds.) (1984). *First Aid for Community Health Workers in Developing Countries.*

UNIT 5 ORAL HYGIENE

CONTENTS

1.0 INTRODUCTION

This unit will cover oral hygiene and the practical skills to use step by step to clean the mouth cavity, tooth and gum.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- set a tray for oral toilet
- perform oral toilet

3.0 MAIN CONTENT

3.1 Overview of Oral Hygiene

Oral hygiene means cleanliness of oral cavity, its parts and organ which include teeth, tongue and gums while, oral toilet means the procedures use in cleaning the mouth cavity

3.2 Equipment for Oral Toilet

- A tray
- Small galipot
- Cotton gauze
- Lint swab
- A clean tooth brush
- Spatula

3.3 Procedures for Oral Toilet

- Explain procedure to the patient
- Open the oral cavity
- Inspect the teeth and presence of any foreign body
- Rinse the mouth with clean water
- Wrap lint gauze on spatula and soak in salt water, then rub against the teeth in the front side, biting surface of the gum, tongue and lips
- Repeat as many times as necessary to clean up
- Ask patient to spit out solution.

4.0 CONCLUSION

Oral hygiene is a simple and common procedure that explains procedures to clean the mouth and oral cavity; it requires you to practice it even at home.

5.0 SUMMARY

Cleaning of mouth, tongue, lips and gums using simple techniques is known as oral hygiene and application of the procedures to perform oral hygiene is called oral toilet.

6.0 TUTOR-MARKED ASSIGNMENT

List the equipment needed for oral toilet

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

Skeet & Muriel (eds.) (1984). *First* Aid *for Community Health Workers in Developing Countries.*

MODULE 2 ASSESSMENT FOR CLINICAL DIAGNOSIS

UNIT 1 FEMALE BREAST SELF EXAMINATION

CONTENTS

1.0 INTRODUCTION

This unit covers female breast self examination, and explains how individuals can perform this examination by themselves. It usually reveals abnormalities or any sign of change in the normal status of the breast.

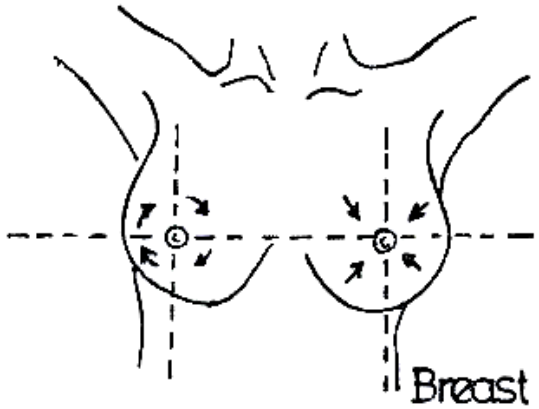
2.0 OBJECTIVES

By the end of this unit, you should be able to:

- examine each breast at a time.

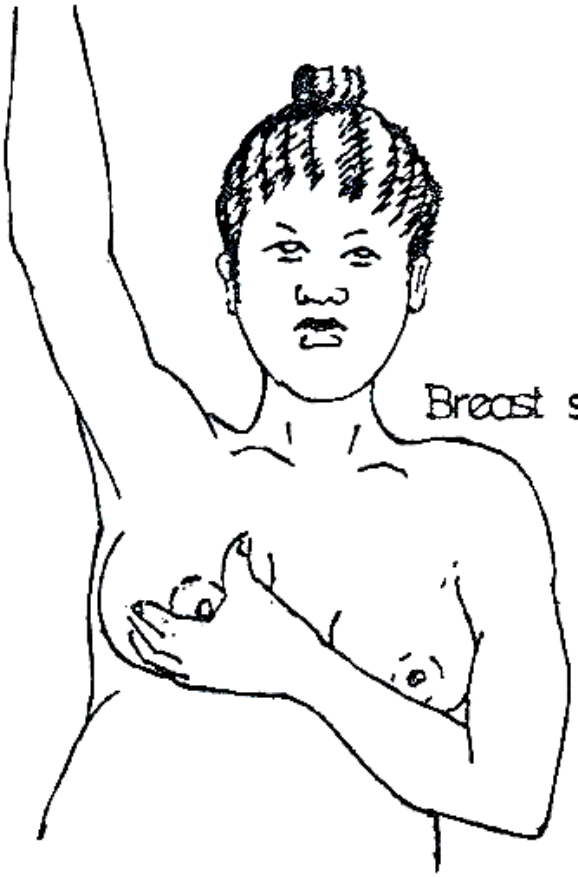
3.0 MAIN CONTENT

1.



Breast self examination.

2.



Breast self examination.

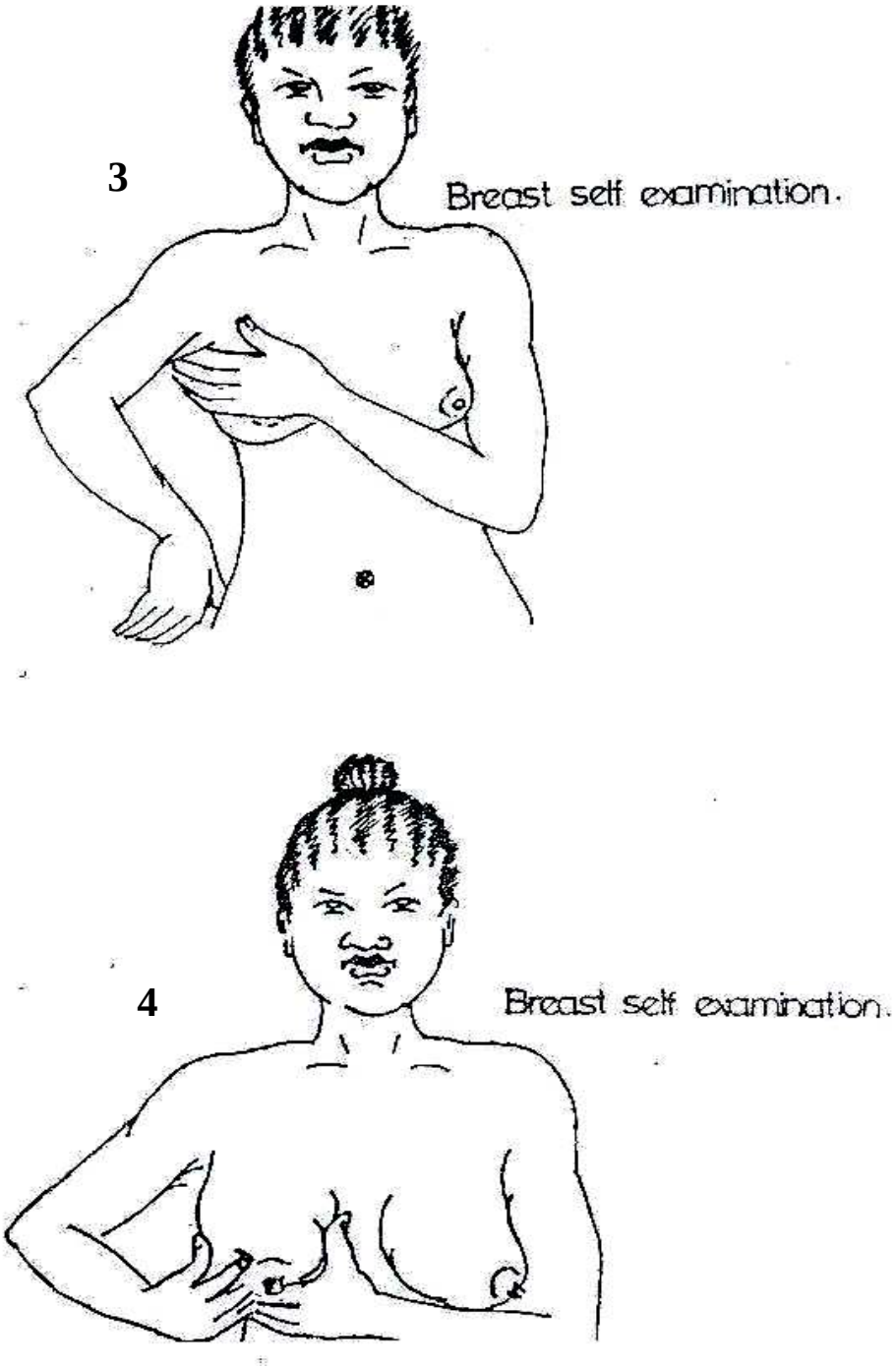


Fig.2.1: Self Examination of Breast
Source: (Modified from CHEW Training Curriculum)

3.1 Procedure for Breast Examination

- Stand up straight in front of a mirror and hold both hands up. If there is no large mirror, hold both hands up and look down at breast
- Look at both breasts, for equality of size, smoothness, and obvious bulges and dimples

- Put both arms down, still standing erect and look at both breast as indicated above
- Examine each breast, one at a time
- Use the pads of the fingers at opposite side of the body (i.e. right hand for left breast) to gently press from the nipple outward to the outer edge
- One part at a time then go from the outer part to the nipple, looking for nipple discharge
- Repeat this for the other breast
- Put both arms down and half -bend arms one at a time.
- Use pads of the finger of the opposite hands to poke into the armpit to feel for lumps in the armpits.
- Look at the nipples of both breasts, and carefully for dimples

4.0 CONCLUSION

Procedures for breast self examination should be done once every two months, and is advisable to start from the age of 14.

5.0 SUMMARY

Breast self examination requires less use of instruments. It is more useful to use both hands, that is, left hand is used to examine right breast vice versa

This examination is to be done individually, except where it is not possible due to ill health.

6.0 TUTOR-MARKED ASSIGNMENT

1. State three reasons for conducting self breast examination.
2. Outline three abnormalities that can be detected during self breast examination.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHEW Training Curriculum, Nigeria.

UNIT 2 BODY-ASSESSMENT OF DEHYDRATION

CONTENTS

1.0 INTRODUCTION

This unit covers the physical examination of some parts of the body to establish the clinical features of dehydration.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- classify degree of dehydration
- physically assess dehydration.

3.0 MAIN CONTENT

Table 2.1: Assessment of Dehydration

	MILD	MODERATE	SEVERE
Observation	A bit fretful	Restless	Unresponsive
Fontanalle	Normal or Slightly depressed	Depressed	Very depressed
Eyes	Normal or slightly sunken	Sunken	Very Sunken
Tongue/Mouth	Dry	Very dry	Very dry Cynanosed
Skin 1. Elasticity (Turgor) 2. Skin temp.	Normal Warm (normal)	Tenting cool	Proposed tenting cold and cynanosed
Urinary output	Normal or slightly decreased (mild oliguria)	Severe oliguria marked reduction	Marked oliguria or anuria (no output)
Muscle tone	Normal	Increased	Very much decreased
Shock	Absent	Absent	Present
Heart Rate	130-140/min	160-180/min	Over 180/min.
Established fluid loss	50 ml/kg.	75 ml/kg. (5% body wt)	100 ml/Kg. (10% body wt)

3.1 Overview of Assessment of Dehydration

Dehydration simply means loss of fluid resulting in the change in normal physical status of some parts of the body such as the skin, eye, tongue, mental alertness, heart rate and urine output.
Assessment of dehydration is a procedure based on physical observation to ascertain the presence of dehydration in the body

3.2 Classes of Dehydration

Dehydration is classified into three: mild, moderate and severe.

3.3 Procedures for Assessment of Dehydration

- Sit or lay the patient on an examination bed
- Observe normal status of eye(for sunken)
- Observe fontanels in children (depression)
- Observe tongue for dryness or cyanosed
- Pinch skin for elasticity or cold and cyanosed
- Observe urine output for oliguria, anuria
- Flex muscles for tone and retraction
- Observe mental alertness for shock
- Observe heart rate for increase or decrease rate
- Observe body temperature for coldness/warm

4.0 CONCLUSION

During assessment of dehydration, whenever two abnormal findings or more appear in the body; it signifies the presence of dehydration.

5.0 SUMMARY

Assessment of dehydration is an observational method to reveal signs of dehydration in the body. It is classified into three mild, moderate and severe.

6.0 TUTOR-MARKED ASSIGNMENT

Visit a hospital and physically assess cases of dehydration in adult and children and identify four important signs noticed from the classes of dehydration.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

Skeet & Muriel (eds.) (1984). *First* Aid *for Community Health Workers in Developing Countries.*

UNIT 3 MEASUREMENT OF WEIGHT TO ASSESS THE NUTRITIONAL STATUS OF INDIVIDUALS

CONTENTS

1.0 INTRODUCTION

This unit explains the process to find out how heavy or light an individual is. This is done by putting him/ her on an appropriate weighing scale

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- identify the type of weighing scales appropriate to the age of users
- carry out/measure weight of individual according to their age.

3.0 MAIN CONTENT

3.1 Equipment Needed for Weighing

- Standing scale (weighing scale for adult)
- Spring/hanging scale (for children)
- Table /basket scale (for infants)

3.2 Procedures for Weighing

(Sequential steps)

- Test scale with a known weight for accuracy
- Balance scale at zero(0) level
- Explain procedure to patient or child’s mother

- Advise patient to undress the child and remove heavy bangles
- For adult and children, they should remove shoes, heavy objects and cloth
- Balance the scale at zero(0)level, then
- Allow patient to climb the scale, or mother should put the child on the weighing scale
- Balance scale while patient is on it or child is on it
- Read the patient's weight from the weighing scale and record reading

4.0 CONCLUSION

Weight is the most potential tool for assessing the current nutritional status of an individual provided the actual age is known..There are three types of weighing scales: Standing scale, Table scale and Spring scale.

Spring scale is simple to use and easy to transport or carry along to the field, it is reliable and accurate. While, Standing and Basket scales, which are also heavy and reliable are usually used in static health facilities.

5.0 SUMMARY

Procedures for weighing are steps arranged to serve as a guide to sequentially measure the weight of an individual. It is possible to have a wrong reading of weight when these procedures are not followed sequentially.

6.0 TUTOR-MARKED ASSIGNMENT

1. Pair-up with colleagues and practice by weighing your selves.
2. How would you assess the nutritional status of a child aged 2 years, who refuses to climb a weighing scale?

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Nutrition for Community Health Workers, Nigeria.

FMOH, (1992). Reviewed CHO Training Curriculum, Nigeria.

UNIT 4 MEASUREMENT OF HEIGHT AND LENGTH OF A CHILD

CONTENTS

1.0 INTRODUCTION

In the previous unit, weight of a child was described as a method of assessing nutritional status. Similarly, this unit will discuss measurement of child length and height as another method of assessing nutritional status of a child.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- measure height and length of a child
- identify the equipment needed for measurement of height and length.

3.0 MAIN CONTENT

3.1 Overview of Measurement of Child Height and Length

A child's height and length in centimetres or inches is measured in order to assess his nutritional status. This determines how tall a child is, when the child is standing upright. Also, length measurement will be able to show how tall or long a child is, but this is done when the child is lying down. While, height is not necessarily dependent on the age of the child.

Height measurement is used for children 2 years and above while length measurement is used for children below 2 years of age because of their inability to stand upright.

The average length or height of a child at birth is 50 cm and this doubles after a year.

3.2 Equipment Needed for Measurement of Height and Length

- Adult weighing scale which has graduated height indices
- Measuring tape calibrated in centimetres and inches
- A long plank or wall, graduated in centimetre from ground/ floor level which is zero(0) point

3.3 Measuring of Height and Length

(Adult and older children)

- Ask subject (Adult and older children) to remove heavy objects, materials and clothes from their body e.g. shoe, head tie, cap, hat, bangles, handset.
- Adjust scale –by forwarding headpiece up right to the graduated measurement wall scale or long plank his/her feet parallel, with heels, buttocks, and back of head touching the graduated measurement board /mark
- Allow his/her arms to hang freely in a natural standing manner
- Adjust scale to down ward, lower the head piece gently to make contact with the top of the head of the client
- If subject is standing against wall or plank use any flat object to represent the head piece with the top of the head
- With the head piece at the correct graduation point
- Take reading and remove the lead piece
- Allow subject to get down

Infant and Children Below 2 Years of Age

- Explain procedure to child or mother
- Get the Child’s co-operation
- Remove heavy materials, shoes, bangles, head tie, hat , cap from the child
- Solicit for help from two trained persons to assist in getting the child into appropriate position, since most children become upset and struggle when measurement is being taken

- Place the child in recumbent or lying down position on flat surface/board so that the child is looking straight up,
- Place the foot piece firmly against the child's feet and make sure the knees are straight
- Read and record the length to the nearest 0.1cm

4.0 CONCLUSION

Measurement of height and length provides a basis to compare and relate the weight of a child with his height and length. It is an unbiased measurement that can ensure that even a child's degree of thinness and stunted growth can be obtained.

5.0 SUMMARY

Use of relevant scale for measurement of length and height can provide accurate reading while the use of relevant scale and wrong positioning of client/subject on the measurement scale can yield wrong reading/result.

Board/scale can be used in the hospital set up. In the community or any place where there is no measurement board/scale, a graduated wall/plank can be used to assess length and height of an individual.

6.0 TUTOR-MARKED ASSIGNMENT

State three (3) possible reasons for wrong reading of individuals' height and length

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

King &, Mourice (eds.) (1984). Primary Child Care,Vol. 2.

UNIT 5 MID-ARM CIRCUMFERENCE MEASUREMENT

CONTENTS

1.0 INTRODUCTION

Measurement of mid-upper arm circumference (MUAC) is another method of assessing the nutritional status of a child.. (MUAC) is measured in centimetres. This method is recommended for the age group 1-5 years.

In the previous unit, we discussed the measurement of height and length of a child as a method of assessing nutritional status. In this unit, we shall discuss other simple procedures that appear to be useful for field work to further assess the nutritional status of children.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- itemise the materials required for mid-arm circumference measurement
- measure mid-arm circumference.

3.0 MAIN CONTENT

3.1 Materials Needed for Measurement of Mid -Arm Circumference

- Measuring tapes
- Shakir's strip
- Biro and paper

3.2 Procedures for Measurement of Mid- Arm Circumference

Tape Measurement

- Obtain Shakir's strip or measuring tape
- Let the child's arm hang down ward
- Locate the middle upper part of the arm between the tip of the shoulder and the tip of otecranon of the elbow
- Place the zero point of the tape measure on the tip of the shoulder and stretch tape down to the tip of the elbow joint
- Read the measurement to the nearest 0.1cm point of the child's upper arm
- Let the child's arm hang down loosely by his side
- Put the tape round the mid-point of the child's upper arm
- Read and record measurement

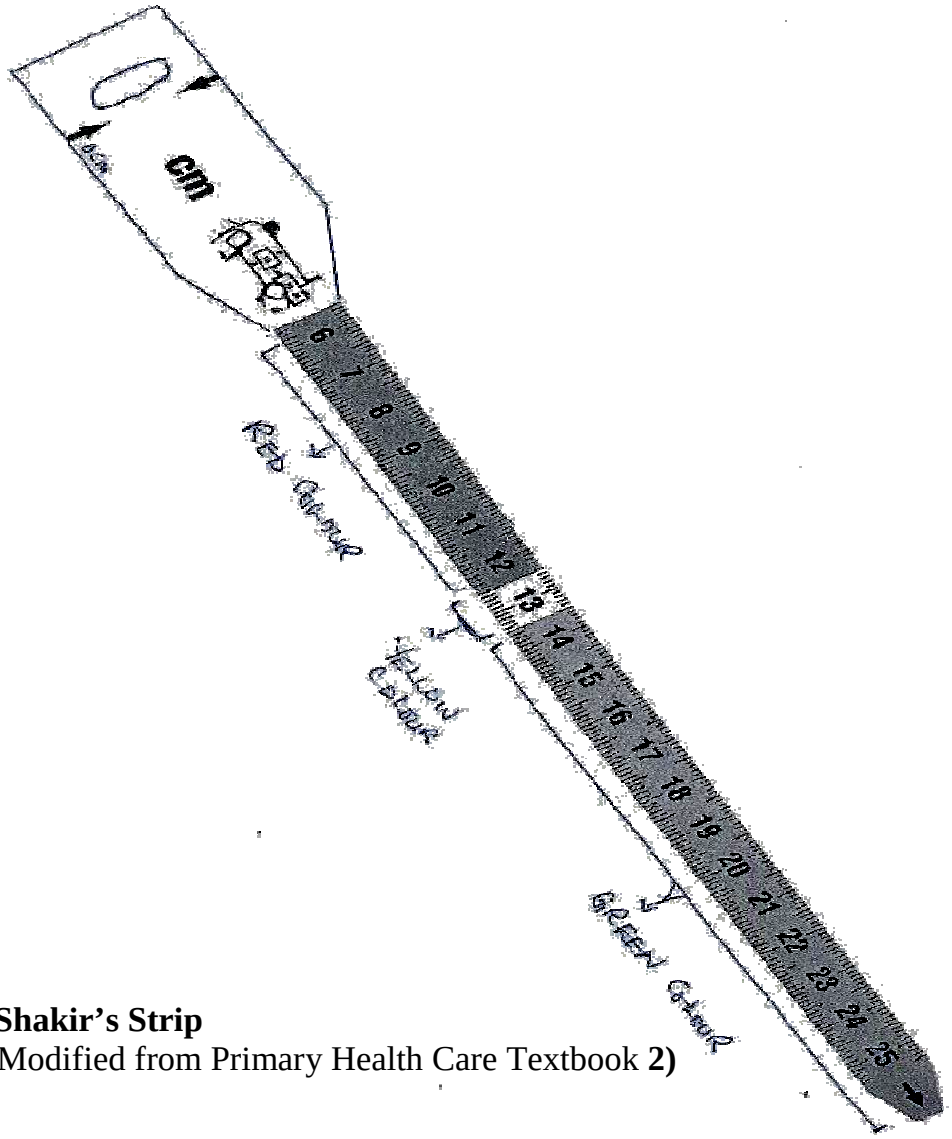


Fig. 2.2: Shakir's Strip
***Source*: (**Modified from Primary Health Care Textbook **2)**

Shakir's Strip Measurement

- Locate the mid-point of the upper arm, as described previously
- Place the strip round identified point without squeezing the muscles or skin where the 0 cm mark meets the various colours is the correct measurement of the child's mid upper arm circumference
- Note the colours and record
- Readings for Shakir's strip and tape methods

- 13.5-17.5cm = green = Normal
- 12.5-13.5cm =yellow = Mildly malnourished
- 7.5-12.5cm = red = Severally malnourished

4.0 CONCLUSION

Mid-Arm circumference measurement is a measure of bone width, subcutaneous fat and muscles development. It is cheap, economical and faster to use especially during field work.

5.0 SUMMARY

Shakir's strip and tape methods can be used for measuring mid- arm circumference, three colours interpret readings of the measurement:

- **Green**-= Normal
- **Yellow**=Mild and malnourished
- **Red** =Malnourished.

6.0 TUTOR-MARKED ASSIGNMENT

What is the meaning of the various colours on Shakir's strip?

7.0 REFERENCES/FURTHER READING

FMOH (1992). Reviewed CHO and CHEW Training Curriculum, Nigeria.

Skeet & Muriel (eds.) (1984). *First Aid for Community Health Workers in Developing Countries.*

Kings & Mourice (eds.) (1984). Primary Child Care, Vol. 2.

UNIT 6 EYE-VISUAL ACUITY TEST

CONTENTS

1.0 INTRODUCTION

This unit explains the skills to apply in testing eye vision at a distance of 6 metres using E. chart.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- examine/test eye vision at a distance of 6 metres using E. chart
- identify possible signs of visual defect.

3.0 MAIN CONTENT

3.1 Requirement for Distance Vision Test

- E- Test Chart
- A wall or standing pillar
- Hanger/ sole tape
- Space room/ Hall with good source of light
- Cardboard paper.

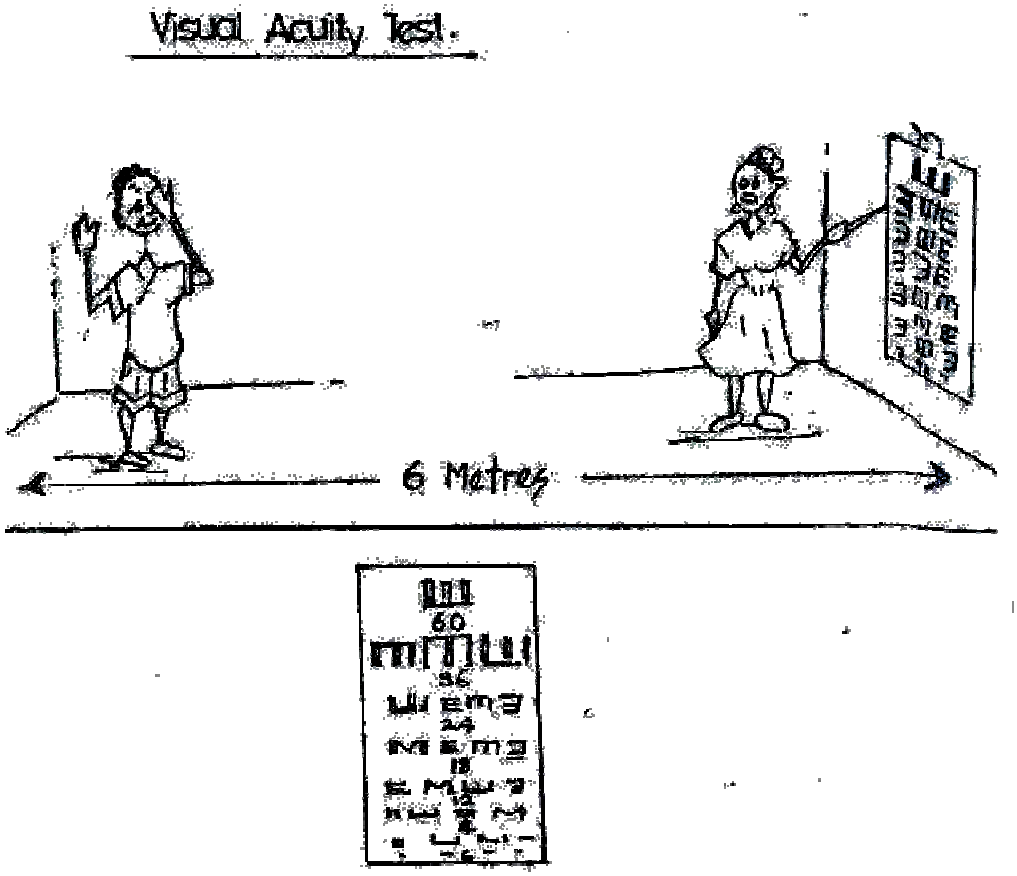


Fig.11.1: E-Chart for 6 Meter Visual Test
Source: (modified from CHEW Training Curriculum)

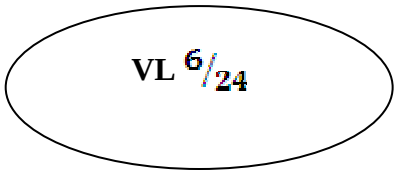
3.2 Procedures for Measuring Vision Using E-Chart

- Identify a place to conduct the test such as a room or Hall that has good light, not too bright or dark.
- Stand or Sit Patient 6 meters from the eye test chart (use ruler or tape to measure the distance).
- Hang or paste E-Chart on the wall or pillar 6 metres distance to the patient.
- Test both eyes one after the other.
- If patient wears glasses, test only with the glasses on.
- Explain and tell patient to indicate with hands which direction the 3arms of E. are pointing.
- Starting from top line of the test E-Chart, carefully point to the "E"s.
- Patient is to cover one eye with palm of hand or cardboard and read the chart with the one uncovered.
- The test line that is seen correctly is the visual acuity in that eye

- Record visual acuity as fraction e.g. $^{6}/_{24}$. Where the numerator

  (6) indicates the distance of the patient from the E-chart and is the distance at which a normal eye can read the E- Chart:

  Thus: V = Visual
  R = Right Eye
  L = Left Eye



- Both eyes are to be tested but one at a time.

  Common Signs of Visual Defect during E-Chart Test

  - Exclusive eye-blinking
  - Thrusting head forward
  - Tearing or red of eye
  - Head felting
  - Eye squinting

4.0 CONCLUSION

Visual acuity test using E-chart is not only a skill to measure eye vision, but to identify common eye defects.

5.0 SUMMARY

Distance vision is measured using so many different vision test techniques that require less scientific equipment and always gives quick results. This test using E-chart is simple to perform and it is affordable.

6.0 TUTOR-MARKED ASSIGNMENT

1. Identify a place to use the Visual E-Chart in your location.
2. What are the normal colours and background colours of E-Chart?

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

MODULE 3 PROCEDURES FOR SIMPLE MINOR SURGERY

UNIT 1 WOUND-DRESSING

CONTENTS

1.0 INTRODUCTION

This unit explains the procedures for dressing of wound. Dressing of wound is a process that involves cleaning of wound with antiseptic, applying of drugs and wrapping the wound with bandage and plaster.

2.0 OBJECTIVES

By the end of this unit, you should able to:

- assemble wound- dressing materials
- dress wounds.

3.0 MAIN CONTENT

3.1 Materials Needed for Wound- Dressing

(TBC) Tincture of Benzoic Compound

- Bandage
- Plaster

- Water and soap
- Hydrogen peroxide

3.2 Procedures for Wound –Dressing

- Assess nature and type of wound
- Examine the general conditions of the injuries and the patient
- Put on hand gloves
- Clean the wound with water and soap
- Remove all dirt.
- Apply TBC, if fresh and superficial wound
- Cover the wound with firm, clean or sterile dressing
- Apply bandages or plaster to support dressing

4.0 CONCLUSION

Dressing of wound is part of medication. The procedure requires skills and frequent practice to clean wound and dress it properly.

5.0 SUMMARY

Wound-dressing is a normal, simple and sterile procedure, but requires skills in examining nature of wounds and injuries before dressing is applied

6.0 TUTOR-MARKED ASSIGNMENT

You should visit a nearby health facility to:

1. Assemble the materials needed for wound- dressing.
2. Perform dressing of wounds.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH(1992). Reviewed CHEW Training Curriculum, Nigeria.

Skeet & Muriel (eds.) (1984). *First Aid for Community Health Workers in* Developing *Countries.*

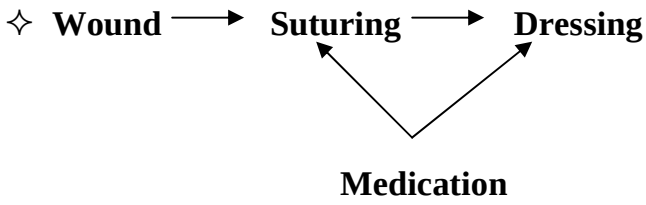
UNIT 2 SUTURING OF WOUND

CONTENTS

1.0 INTRODUCTION

You recall that in the previous unit, dressing of wound was discussed and in this unit another aspect of wound-dressing which is suturing of wound will be treated.

The suturing of wound is a procedure which involves bringing together parts of the tissue involved in a wound, using sterile tread and needle to accelerate the healing process.



2.0 OBJECTIVES

By end of this unit, you should be able to:

- assemble the materials needed for suturing of wound
- perform suture of wound.

3.0 MAIN CONTENT

3.1 Materials Needed for Suturing Wound

- Kidney dish with lid containing sterile scissors, dissecting forceps (toothed and non - toothed) artery forceps, etc.

- Gallipot with sterile suturing materials e.g. catgut, threads, needles.
- Kidney dish with sterile syringe and needles.
- Kidney dish containing dry sterile gauze and cotton wool.
- Gallipot for pouring lotions such as Savlon, Hibitane in water, Hydrogen Peroxide, normal saline.
- Sterile needle holder.
- Bowl with clean water – injections e.g. Xylocaine Tray with hand gloves, plaster.

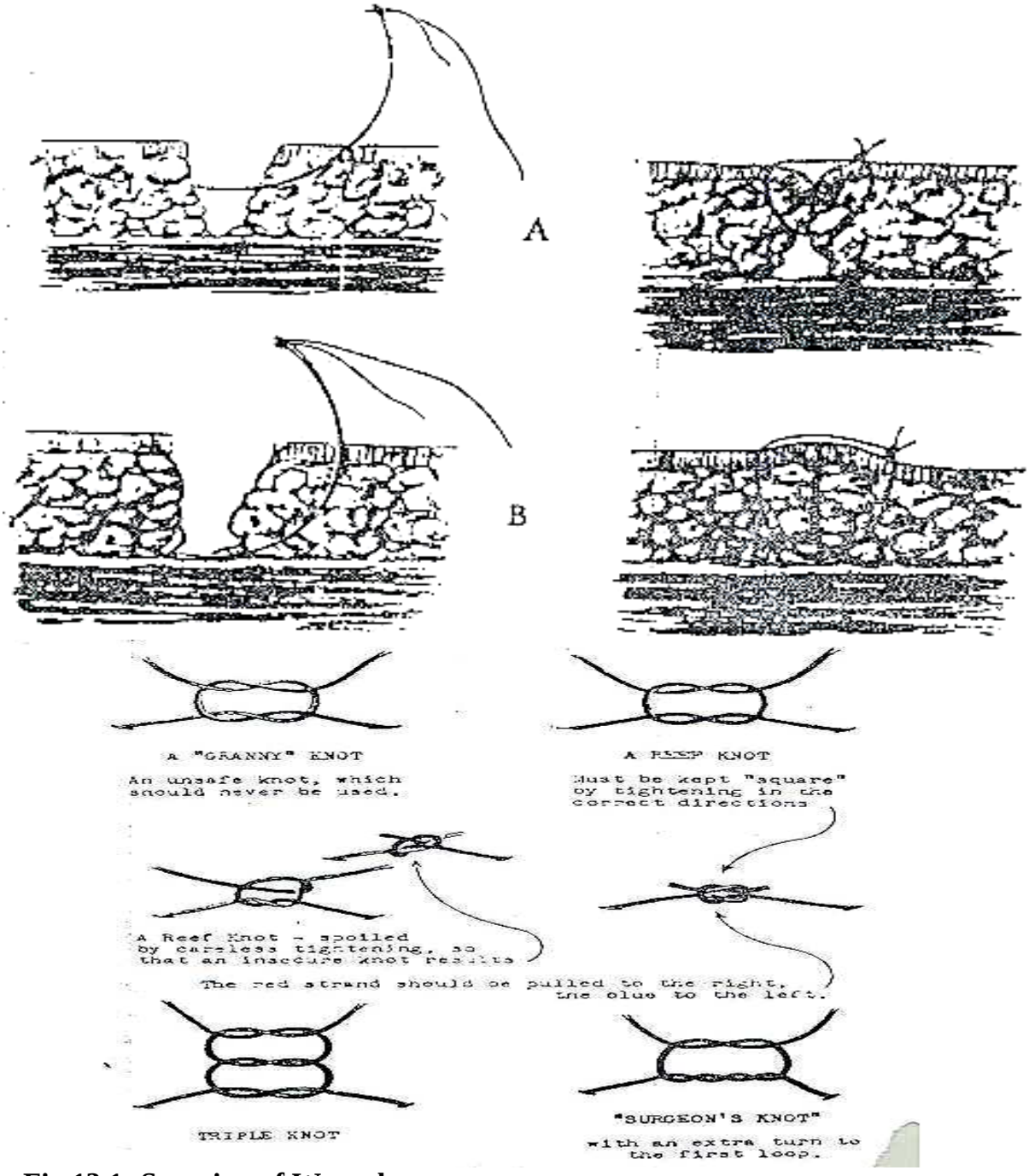


Fig.13.1: Suturing of Wound
Source: (Modified from FMOH Clinical Session Plans)

3.2 Steps for Suturing of Wound

- Inspect the wound.
- Assemble the needed materials for suturing.
- Prepare patient/client for suturing of wound.
- Conduct physical examination and obtain history of the wound.

3.3 Procedures for Suturing of Wound

- Wash with sterile water and soap, and then dry it.
- Put on sterile hand gloves.
- Infiltrate under the skin with 5% Xylocaine or Lignocaine and leave for about 1 – 2 minutes.
- Clean the wound with antiseptic.
- Irrigate with normal saline.
- Remove any expose foreign body, dead or non viable tissue.
- Depending on the depth of the wound; suture inner layers using strong chronic catgut for fascia, plain catgut for subcutaneous tissue, and Non absorbable suture (e.g. silk or nylon) for the skin.
- Use round bodied needles for inner structure e.g. fascia and subcutaneous tissue and cutting needle for skin.
- Suture the wound using simple interrupted suture.
- Applied techniques of suture on the wound using thread, the right type of needle with the appropriate suture.
- Make the first stitch in the middle of the wound.
- Holding the needle with the needle holder or hard, introducing the needle vertically through the skin, transferring the entire thickness bringing the needle out through the opposite side of the other cut surface.
- Tie the sutured closed using either the reef or triple knot (following the steps in figure 3&4 above) make enough other stitches to close the wound
- Suture the wound in layers, starting from inner most structures, and stitch the skin last
- Cover with dry sterile gauze and secure firmly with strip of strapping
- Inform patient / client to be re-assured to remove stitches after 7-10days.

4.0 CONCLUSION

a) Usually stitches takes between 6 to 7 days intact before removal.
b) After suturing with thread and needle, then dry dressing is applied on it.

5.0 SUMMARY

Suturing of wound simply refers to procedures of bringing back parts of an open wound together, to its original normal shape using thread and needle like sewing of a torn cloth.

It requires sterile simple procedures. This unit focused on procedures for suturing of a wound.

6.0 TUTOR- MARKED ASSIGNMENT

Visit a health centre and perform the following under supervision of an experienced Health Worker/Theatre Nurse

1. Inspect wound and suture it.
2. State the procedures for suturing a wound

7.0 REFERENCES/ FURTHER READING.

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

UNIT 3 CIRCUMCISION

CONTENTS

1.0 INTRODUCTION

Circumcision is a surgical removal of the foreskin of the penis. This unit shall explain the procedures and materials needed to perform this activity.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- assemble the materials needed for circumcision
- perform circumcision.

3.0 MAIN CONTENT

3.1 Materials Needed for Circumcision

- Scissors or surgical blade
- Small bandage
- A tray
- A bottle of (TBC) Tincture of Benzoic Compound
- Galli pot with cotton wool
- Antiseptic solution
- Kidney dish with lid containing sterile artery forceps
- 1 ampoule of Adrenaline (**NOT TO INJECT PATIENT**)
- 1 ampoule of Xylocaine.

3.2 Procedures for Circumcision

- Place the patient properly on the bed or table
- Put on hand gloves

- Clean the site properly with antiseptic
- Hold the penis with one hand
- Take the blunt artery forceps and pass gently through the opening at the top of the penis
- Draw the foreskin forward and clamp with artery forceps
- Administer Xylocaine to localise the foreskin
- Cut the foreskin with scissors or surgical blade
- Push the remaining foreskin down to completely expose the head of the penis
- Control bleeding by applying firm bandage soaked in TBC
- If oozing continues, squirt some Adrenaline to stop bleeding
- Wrap the glands with a strip of gauze soaked in TBC
- Observe the patient for a day.

4.0 CONCLUSION

Circumcision is limited to males and it is a simple procedure that requires constant and frequent practice before one can be familiar with the procedures.

5.0 SUMMARY

This unit dealt with male circumcision whereby profuse foreskin of the penis is removed using a sterile surgical procedure called circumcision.

6.0 TUTOR-MARKED ASSIGNMENT

You should visit nearby hospital and perform the following:

1. Assemble the materials needed for circumcision.
2. Perform circumcision under the supervision of a facilitator or theatre nurse.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

UNIT 4 EPISIOTOMY

CONTENTS

1.0 INTRODUCTION

This Unit focuses on the procedures for conducting minor surgical incision about 4 – 5cm long at a right angle through the perineal tissue. It is designed to enlarge the vulval outlet during delivery. These processes are known as **Episiotomy.**

2.0 OBJECTIVES

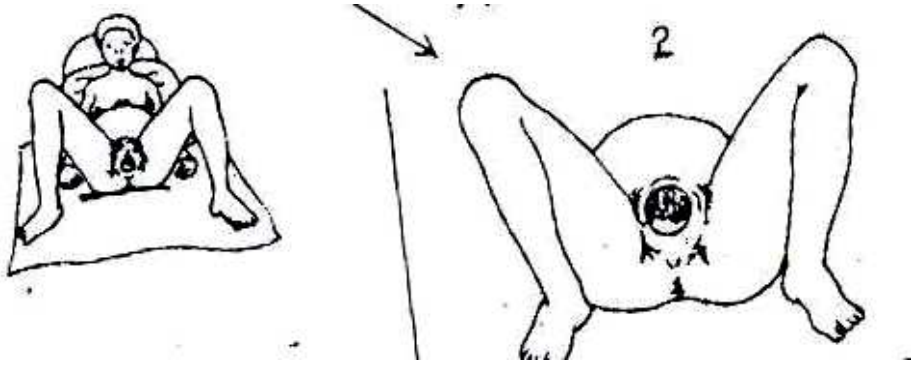
By the end of this unit, you should be able to:

- assemble the equipment needed for episiotomy
- perform episiotomy.

3.0 MAIN CONTENT

3.1 Equipment Needed for Episiotomy

- Tray
- Kidney dish with syringes (10ml and 5ml)
- Gallipot with suturing material
- Kidney dish with lid containing scissors
- Gallipot with cotton wool swap soaked in disinfectant.



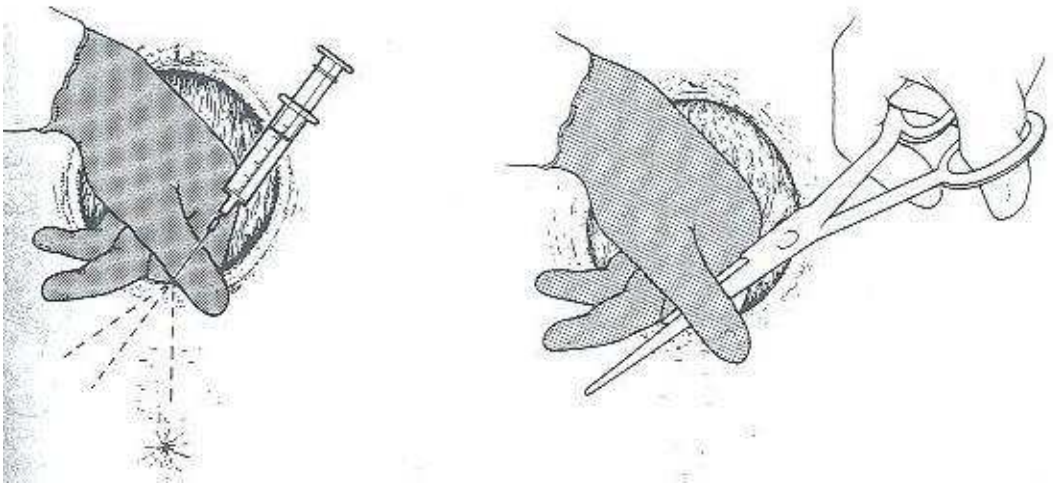


Fig.3.1: Process of Episiotomy
Source: Myles Textbook of Midwifery 13th International Edition

3.2 Procedures of Episiotomy

- Put on hand gloves
- Infiltrate 10mls of lignocaine 0.5% under the skin of the perineum and wait for 3 minutes
- Place your two fingers under the left inner side of the labia to avoid injury to the child's head
- Make an episiotomy cut between your two fingers using scissors/surgical blade – 107a
- Control bleeding by pressing swab on the episiotomy wound
- Allow the head slowly to be delivered
- Wait for the separation of placenta and deliver
- Suture the episiotomy wound layer by layer
- Clean and apply firm pad
- Re – visit and remove suture/stitches, where necessary after 5 – 10mls with the episiotomy (depending on the type of suture used).

4.0 CONCLUSION

Episiotomy is a minor surgical cut that takes few minutes; it is simple and easy to perform. You should be able to perform it practically after careful observation and participation in the process in a nearby health centre.

5.0 SUMMARY

This Unit explained procedures of conducting episiotomy, and the equipment needed for the activity. It is a sterile procedure that requires the use of scissors, thread and needle.

6.0 TUTOR-MARKED ASSIGNMENT

Itemise the procedures for episiotomy.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Clinical Skills for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

Myles (1992). Revised 13th International edition of Midwifery Text Book.

UNIT 5 EAR-PIERCING

CONTENTS

1.0 INTRODUCTION

This unit focuses on the procedures for ear- piercing and the logical way in incising a hole in the ear of a patient which can be used for ear rings and earth threads.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- perform ear- piercing.

3.0 MAIN CONTENT

3.1 Materials Needed for Ear- Piercing

- A receiver for used swabs
- A kidney dish with spirit swabs
- A needle holder
- Galli pot containing needle and thread (immersed in spirit)

3.2 Procedures for Ear-Piercing

- Position the baby on the mother’s laps
- Identify the area of the pinna to be pierced (usually lower part of the lobe)
- Wash your hand with soap and water and dry it
- Put on hand gloves
- Clean the area with spirit swab, pierce the ear at the selected spot using threaded needle
- Leave a small patent of the thread in place (about one inch long)

- Knot the thread at the two ends and cut
- Carry out the same procedure on the other ear
- Clean the pierced site daily with spirit swab and dab with olive oil or vaseline
- Leave the thread in place for at least 7 days to ensure that the wound is properly healed
- After 7 days, the thread can be replaced with ear-rings

4.0 CONCLUSION

Ear-piercing can be applied to all ages and it requires sterilised procedures

5.0 SUMMARY

Ear piercing is usually performed in a hospital setting, and it requires sterilised procedures.

A hole is created at the lobe of the pinna of the ear using thread and needle of the patient to enable ear ring passage.

6.0 TUTOR-MARKED ASSIGNMENT

1. Visit a health facility and:

a) Assemble materials for ear- piercing
b) Perform ear- piercing

2. Describe the procedures for ear- piercing.

7.0 REFERENCES/FURTHER READING

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

Skeet & Muriel (eds.) (1984). *First Aid for Community Health Workers in Developing Countries*.

MODULE 4 SIMPLE LABORATORY INVESTIGATION

UNIT 1 COLLECTION OF URINE SPECIMEN

CONTENTS

1.0 INTRODUCTION

This unit explains the procedures for urine collection. It further explains how urine is collected from patients, deposited in a container and sent to the laboratory for examination.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- collect urine specimen.

3.0 MAIN CONTENT

3.1 Procedures for Collection of Urine Specimen

- Prepare specimen container
- Label specimen container with marker/pen (name of the specimen, date and time of collection, name of the patient/client)
- Give specimen container to the patient/client to put urine, and instruct them as follows.

- For (mid-stream urine); client/ patient should pass few drop of urine first then catch the middle position of stream into the specimen container before finishing.

  For terminal urine; client/patient to begin urination but collect into specimen container when it is towards end of urination.

4.0 CONCLUSION

Urine should not be contaminated with stool during collection; urine specimen container should be clean and dry. This unit explained procedures to conduct urine collection.

5.0 SUMMARY

Urine is collected at early morning hours, midstream or terminal, every urine specimen container should be labeled with date and time of collection and type of specimen collected (terminal or midstream).

6.0 TUTOR-MARKED ASSIGNMENT

Visit a hospital nearby and do the following:

i. Inspect various types of specimen containers.
ii. Collect urine specimen from a child of 5 years and label it accordingly.

7.0 REFERENCES/FURTHER READING

FMOH (1990). CHO Training Manual, pg 47.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

Author, M.C. (1974). *Laboratory Services in Rural Hospitals*.

UNIT 2 URINE TEST FOR SUGAR AND PROTEIN

CONTENTS

1.0 INTRODUCTION

This unit is more or less a continuation of the previous unit, and it stresses the procedures for conducting routine laboratory test using dip-strip (album strip albumin clinix strip-sugar).

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- perform routine urine test for sugar and albumin.

3.0 MAIN CONTENT

3.1 Procedures for Urine Test

- Collect urine specimen in a clean container
- Check dip strip for normalcy and expiry date
- Dip strip into the urine for 1 second
- Remove the stick of strip from the urine and wait for the prescribed length of time (10-12second)
- Examine the test area for any change in colours
- Match the dipped stick strip with the colour chart or the bottles (clinix strip for sugar test and albumin for protein)
- Read off the measurement and record
- Dispose of the urine and used dip strip.

4.0 CONCLUSION

Positive test result for albumin is indicated when colour of the strip test area changes from yellow to green; while, positive sugar is when the

colour area of the test strip changes from pink to dark mauve. These results should be labeled on the colour chart of the bottle

5.0 SUMMARY

This test is a simple laboratory routine test that can be conducted in the laboratory or at home. It only requires urine specimen and the test can be performed and results obtained on the spot.

6.0 TUTOR-MARKED ASSIGNMENT

Visit a health centre and perform the following:

i. Examine various types of dip strip for urine test.
ii. Distinguish the differences in test for sugar and protein.
iii. Perform urine test under the supervision of your facilitator or health worker.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Nutrition for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

UNIT 3 SAHLI METHOD OF HAEMOGLOBIN ESTIMATION

CONTENTS

1.0 INTRODUCTION

Haemoglobin is an oxygen- carrying substance found at the centre of red blood cells and its reading is estimated in percentages. This unit focuses on the method of estimating haemoglobin using Sahli haemoglobinometre

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- itemise the equipment for haemoglobin estimation
- perform haemoglobin estimation.

3.0 MAIN CONTENT

3.1 Equipment for Sahli Method

- American optical haemoglobinometre (set)
- Washing hand basin
- A set of tray with lid
- Two kidney dishes, one for sterile needles and stylets, and others with used swab and stylets
- Two Galli pot with cotton wool swab and other one with dry cotton wool

3.2 Procedures for Haemoglobin Estimation

- Test haemoglobinometre to ensure it is in good working condition
- Sit patient comfortably
- Clean the thumb with cotton wool soaked in methylated spirit
- Wipe the thumb dry or allow it to dry before pricking
- Slide blood chamber tightly into the clip
- Prick patient thumb or heal in cases of infants
- Place the edge of the blood chamber against the blood collecting on the pricked finger and allow blood to be sucked in by capillary action
- Insert entire unit into instrument
- Press illuminating (lighting) thumb button and observe through eye piece
- Move lever until both green field match in intensity
- Read finding is grain on scales as indicated by the lever
- Recording findings/reading

4.0 CONCLUSION

Haemoglobin estimation using haemoglobinometre is a standard and hospital- based system, any mistake may alter the reading.

5.0 SUMMARY

This method of haemoglobinometre estimation of HB is more scientific and it can provide on the spot results. This unit identifies the materials and procedures needed for the estimation.

6.0 TUTOR-MARKED ASSIGNMENT

1. Visit a hospital and perform Hb estimation using haemoglobinometre.
2. List the equipment needed for haemoglobin estimation.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Nutrition for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.

UNIT 4 TALLQUIST METHOD OF HAEMOGLOBIN ESTIMATION

CONTENTS

1.0 INTRODUCTION

This unit highlights another approach of haemoglobin determination using the Tallquist Method. It is a simple procedure that can be performed in a hospital or at home.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- perform haemoglobin (HB) estimation using the Tallquist Method.

3.0 MAIN CONTENT

3.1 Procedures for Haemoglobin Estimation

Set a tray containing the following:

a) Kidney dish with needle and stylets
b) Galli pot with swab soaked with spirit
c) Hand gloves
d) Tallquist Paper Chart

3.2 Procedures for Tallquist Method

- Swab the thumb and allow it to dry
- Prick the thumb with stylets
- Collect the blood with blotting paper

- Compare the degree of redness with the Tallquist Paper Chart to estimate the percentage
- Record findings

4.0 CONCLUSION

Haemoglobin is estimated using Tallquist Method and readings that match the Tallquist Chart is considered as normal and significant results.

5.0 SUMMARY

This method of haemoglobin determination is more economical and mobile. It provides results on the spot.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss procedures of Hb estimation using Tallquist Method.

7.0 REFERENCES/FURTHER READING

FMOH (1982). Session Plans on Nutrition for Community Health Workers, Nigeria.

FMOH (1992). Reviewed CHO Training Curriculum, Nigeria.