MINISTRY OF HEALTH

NATIONAL SAFE MOTHERHOOD SERVICE PROTOCOL

DECEMBER, 2008

USERS GUIDE

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PREFACE

Complications of pregnancy, childbirth and unsafe abortion are a major cause of death in women of reproductive age in Ghana. The major causes of maternal death include sepsis, haemorrhage, hypertensive disorders of pregnancy, obstructed labour and abortion complications, with anaemia being an important underlying cause of many maternal deaths. In addition, problems related to pregnancy can cause severe pain, discomfort, or disability, if they are not identified and treated properly. Infections, asphyxia (breathing problems) and pre-maturity are the leading causes of death in the newborn especially in the first week of life. Late neonatal deaths are due to infections acquired after birth, many of which are associated with poor hygiene, lack of information on adequate newborn care and/or poor neonatal feeding practices.

The Safe Motherhood Programme aims to improve women's health in general, and specifically to reduce maternal and newborn mortality and morbidity. The main strategies of the programme are to improve the quality and coverage of maternal health services, and to increase awareness about maternal and newborn health issues in the community. Although most women in Ghana receive antenatal care at least once during pregnancy, less than half deliver in a health facility, and even fewer receive post-natal care. In addition, complications are not always recognised by women and their family members, and are not always managed appropriately at health facilities. These problems contribute significantly to poor maternal and newborn health.

The goal of these protocols is to serve as a guide for comprehensive maternal health care in Ghana. The document outlines step-by-step actions for identifying and treating common pregnancy-related complications, and has been designed to provide guidance at all levels of the health system. All personnel involved in the care of women, e.g. midwives, nurses, medical assistants, public health workers and doctors, should find this manual useful. It is not intended to be a textbook; it assumes that the health workers who are using it have basic knowledge and skills in maternity care, including knowledge of the partograph. Instead, it is intended as a reference guide to ensure that all health workers know what is expected of them and what they should do when providing maternal and newborn health services in Ghana.

In addition to these protocols, a portion on Safe Motherhood Information, Education and Communication Topics has been provided. This is intended to guide reproductive and child health service providers on the areas to focus on during interaction with various individuals and target groups. A special emphasis has been placed on relevant topics for young people against the backdrop of increasing adolescent sexuality. The National Safe Motherhood Protocols is the main resource document for the safe motherhood programme in Ghana.

Dr. E. K. Sory
Director General (Ghana Health Service)

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USERS GUIDE

INTRODUCTION

Review of the national protocols for the safe motherhood programme has been necessitated by developments in the management of pregnancy and childbirth-related conditions based on current evidence. For programming purposes as well as the depth of issues covered, the protocols for maternal and newborn health have been separated from that for family planning, the latter is presented in a separate document. The safe motherhood protocols cover the management of pregnant women and their newborn from the community level (CHPS) to the highest referral level.

Features of this edition include updates for antenatal, labour and delivery as well as postnatal care. There has been a re-definition of the different levels of anaemia in pregnancy, the review of the prevention and management of malaria during pregnancy in line with the new malaria control policy and HIV counselling and testing in pregnancy and management for the prevention of mother-to-child transmission of HIV. There is also a section on the management of the common disorders of pregnancy and more details have been provided for the recognition and management of bleeding in early and late pregnancy.

There has been a review of the partograph, with a re-definition of the beginning of the active phase of labour from 3cm to 4cm and removal of the latent phase. Monitoring during the latent phase will be done on the relevant observation charts. Active management of the third stage of labour has been updated and the duration of the fourth stage of labour had been expanded to six hours following delivery. Increased attention has been paid to the prevention and management of post-partum haemorrhage, a leading cause of maternal deaths in Ghana, by the introduction of the use of misoprostol at community level.

In addition to the newborn danger signs presented in the postnatal section, there is also presentation of common concerns of the postnatal period and a brief on thermal care for the low birth weight baby. A portion has been devoted to Information, Education and Communication on a range of reproductive health issues, with a special emphasis on topics for young people. The annexes portion provides more illustrations, flow charts for management of selected clinical conditions and a learning guide for some procedures.

USERS GUIDE

USER'S GUIDE TO THE NATIONAL SM SERVICE PROTOCOLS

This document presents the SM services for which these protocols have been developed.

It consists of:

- Objectives
- Routine Management
- Steps in Treatment/Management of Condition/Complication

~~L~~evel A- Community (CHPS Compound/CHO, TBA)

~~L~~evel B- Health Centre/Community Midwife

~~L~~evel C- Referral/District Hospital

LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	:	Acquired Immune Deficiency Syndrome
ANC	:	Ante-natal Care
APH	:	Ante-partum Haemorrhage
ARM	:	Artificial Rupture of Membranes
ART	:	Anti-Retroviral Therapy
ARV	:	Anti-Retroviral
BCG	:	Bacillus Calmette-Guerin
Beta-HCG	:	Beta-Human Chorionic Gonadotrophin
BID	:	Two times in a day
BMI	:	Body Mass Index
BP	:	Blood Pressure
BPM	:	Beats Per Minute
BTL	:	Bilateral Tubal Ligation
BUN	:	Blood Urea, Nitrogen
CHOs	:	Community Health Officers
CPD	:	Cephalo-Pelvic Disproportion
CPR	:	Cardio-Pulmonary Resuscitation
CS	:	Caeserian Section
CTG	:	Cardiotogogram
D&C	:	Dilatation and Curettage
DPM	:	Drops Per Minute
ECV	:	External Cephalic Version
EDD	:	Expected Date of Delivery
EOC	:	Essential Obstetric Care
FBC	:	Full Blood Count
FBS	:	Fasting Blood Sugar
G6PD	:	Glucose 6-Phosphate Dehydrogenase
HB	:	Haemoglobin
HBV	:	Hepatitis B Virus
HIV	:	Human Immunodeficiency Virus
HVS	:	High Vaginal Swab
IE&C	:	Information, Education and Communication
IM	:	Intra-Muscular
IPT	:	Intermittent Preventive Treatment
I.U	:	International Units
IUFD	:	Intra-Uterine Foetal Death
ITN	:	Insecticide Treated Net
IV	:	Intravenous
LAM	:	Lactational Amenorrhoea
LAP	:	Lower Abdominal Pain
LFT	:	Liver Function Test
LMP	:	Last Menstrual Period

LOP	:	Left-Occipito-Posterior
$MgSO_4$	:	Magnesium Sulphate
MmHg	:	Millimetres of Mercury
MPs	:	Malaria Parasites
MVA	:	Manual Vacuum Aspiration
OA	:	Occipito-Anterior
OPD	:	Out-Patient Department
OPV	:	Oral Polio Vaccine
ORS	:	Oral Rehydration Salt
PMTCT	:	Prevention of Mother-To-Child Transmission
POC	:	Products of Conception
POD	:	Pouch of Douglas
PPH	:	Post-Partum Haemorrhage
QID	:	Four times in a day
RBC	:	Red Blood Cells
RE	:	Routine Examination
ROP	:	Right-Occipito-Anterior
SM	:	Safe Motherhood
SP	:	Sulphadoxine Pyrimethamine
STI	:	Sexually Transmitted Infections
SVD	:	Spontaneous Vaginal Delivery
TBA	:	Traditional Birth Attendant
TID	:	Three times in a day
TPHA	:	Treponema Pallidum Haem-agglutination
TT	:	Tetanus Toxoid
UTI	:	Urinary Tract Infection
VDRL	:	Venereal Disease Reference Laboratory
VE	:	Vaginal Examination
WBC	:	White Blood Cell

SAFE MOTHERHOOD PROTOCOLS

I. ANTENATAL CARE

A. OBJECTIVES

Antenatal care (ANC) is the health care and education given during pregnancy. Antenatal services are an important part of preventive and promotive health care.

The objectives of ANC include:

1. To promote and maintain the physical, mental and social health of mother and baby by providing education to the pregnant mother on nutrition, rest, sleep, personal hygiene, family planning, immunization, danger signals, STI/HIV/AIDS birth preparedness and complication readiness.
2. To detect and treat high-risk conditions arising during pregnancy, whether medical, surgical or obstetric.
3. To ensure the delivery of a full term healthy baby with minimal stress or injury to mother and baby.
4. To help prepare the mother to breast feed successfully, experience normal puerperium and take good care of the child physically, psychologically and socially.
5. To ensure safe delivery and postpartum health.
6. To promote quality care, antenatal care services must be organised in such a manner as to provide comprehensive and individualised care. As much as possible all care activities e.g. history taking, physical examination and treatment, should be provided by the same care provider to the pregnant woman. (Focus Antenatal Care)

B. ROUTINE MANAGEMENT

Number of Visits: The number of times a client needs to be seen during pregnancy may vary. For the uncomplicated pregnancy it is recommended that at least four ANC visits should be made according to the following schedule:

First Visit	From onset of pregnancy up to 16 weeks gestation
Second First	Between the 24th to 28th week of pregnancy
Third Visit	At 32nd week of pregnancy
Fourth Visit	At 36th week

Counsel a woman who is being seen according to the routine schedule to report to the clinic at any time she feels unwell or has any problem.

See the woman more frequently if complications are identified at any time during the pregnancy.

I. FIRST ANTENATAL VISIT:

Take a comprehensive history.
The purpose of the history is to:

- Assess the health of the woman,
- Confirm pregnancy
- And identify any problems, which could adversely affect child bearing.

The history must include the following information:

a. Take Personal Information

- Name, age, home address, occupation, marital status husband/partner, next of kin (name, address telephone number)

b. Take History

- Past obstetric history (including complications)
  History of present pregnancy (record LMP and calculate EDD and estimate gestational age)
- Contraceptive history

Ways to Calculate Due Date
Calendar Method To find the Due Date : Take the first day of the last monthly bleeding and count backward 3 months. Then add 7 days and 12 months. For example, if her last monthly bleeding started May 6, 2005, count back 3 months (April 6, March 6, February 6). Then add 7 days (February 6 + 7 days). February 13, 2006 is her due date. You can also calculate this by adding 9 months and 7 days to the first day of the last monthly bleeding. Gestational Wheel To find the Gestation and Due Date: Calculate on the gestation/pregnancy wheel (if you have one).

- Personal medical and surgical history, including any known allergies to medication
- Family medical history

NB: - Record all information in the maternal health record book

c. Perform Physical Examination

General Examination

Examine the woman from head to toe with emphasis on examination of the conjunctiva and nail beds for pallor (anaemia). Examine the abdomen, and the pelvis for any sign of deformity.

Examine the breast for:

- Discharge
- Lumps
- Nipple, whether everted or inverted

Record The Following:

i) Temperature
ii) Pulse
iii) Blood pressure
iv) Weight and height
iv) Gait or deformity

d. Obstetric Examination:

i) Inspect abdomen for its shape and note presence of scar,
ii) Palpate for foetal size, lie and presentation and position
iii) Auscultate foetal heart beat
iv) Measure the symphysio fundal height in centimetres after 20 weeks.

All the baseline recordings will be used for comparism as pregnancy progresses

Vulva-vaginal Examination (Information on STIs should be recorded):
Inspect the vulva and perineum for abnormal discharges, rashes, warty growth and ulcers.

During the first trimester digital examination may be performed where necessary to confirm pregnancy, detect ectopic gestation, detect the position of the uterus, and detect fibromyoma or any extra uterine abnormality such as ovarian cyst.

e. Laboratory And Other Investigations
(Where The Capacity To Carry Out These Tests Exists):

Request/ perform the following

i. Urine for:
   - Proteins
   - Sugar
   - Midstream specimen of urine for bacteriuria, ova and pyuria (pus cells)
   - Pregnosticon test to confirm pregnancy (first trimester)

ii. Stool for
   - Ova
   - Parasites e.g. worms

iii. Blood for:
   - Haemoglobin level (Hb)
   - Sickling (Hb electrophoresis if positive)

- Group and Rhesus factor (Antibody titre if Rhesus negative)
- VDRL (TPHA if test is Reactive)
- HIV (must be accompanied by counselling) then CD4 Count if HIV positive
- G6PD
- Hepatitis B (HB surface antigen)

iv. Pelvic Ultrasound if indicated (e.g. for dating, foetal viability and

All laboratory /investigation results must be reviewed before next routine visit is scheduled.

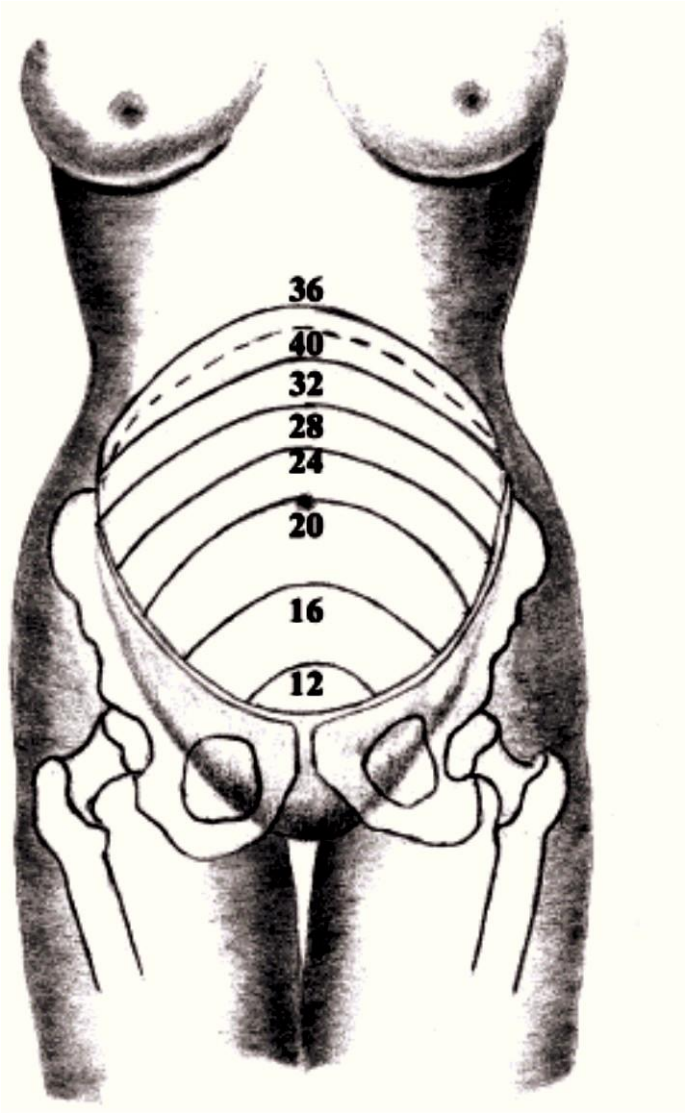

Fig. 1

f. Client Education:

Education is an essential part of antenatal care; through education, women learn what they can do to protect their health during pregnancy, why medical care is important, and what danger signs to watch out for. In order for education to be effective, health workers should follow these principles:

- Courtesy and kindness: Clients should be treated with respect and, especially if they are unsure or frightened, with sympathy.
- Listen and ask: Many women already know a great deal about pregnancy and childbirth: before telling them what they should do, the health worker should ask questions to find out what they know and what they want to learn.
- Health Education should be individualised: related to the gestational age, and specific problems identified (See IEC Section)...
- Answer questions: In addition to providing the basic information outlined below: health workers should be sure to respond to any questions or concerns women may have.

Give personal attention: Every woman is different, and has different problems and needs both in terms of the medical care and general information. Therefore, every woman should be given information, and counselling as an individual.

Cover the following topics during client education:

i. Explain the purpose of antenatal care, as well as:
   - Timing of next visit
   - Total number of visits
   - What to expect at subsequent visits

ii. Briefly explain physiological changes and events in pregnancy (e.g. changes in the breasts, growth of the foetus, onset of labour, etc.)

iii. Care of her health

Diet and nutrition: Use food chart in maternal health record book to educate woman

- Rest and exercise: Encourage woman to take between 6-10 hours of sleep each night, and try to rest for one hour during the day, undertake moderate exercise regularly, if her daily activities do not entail much physical exercise. (Refer to page12 on exercises)?
- Personal hygiene advice woman to keep her body clean, especially the hands, genital area and breasts, to minimise chances of infection.

- Malaria prevention: Educate woman to keep her environment clean, use insecticide treated nets and on the purpose of IPT
- Counsel woman on HIV and offer her HIV test (PMTCT)
- Counsel woman on the use of condom to prevent STIs and discuss other sex related issues (IEC section)

iv. Danger signs during pregnancy
- Swelling of feet, hands, or face
- Severe headache or blurred vision
- Severe abdominal pain
- Persistent vomiting
- Jaundice
- Rupture of the membranes
- Pale conjunctiva, tongue, palms, nail beds
- Offensive or discoloured discharge from vagina
- Bleeding from the vagina
- Fever
- Absence of foetal movements

v. Birth preparedness and complication readiness
- How to reach help when complications develop
- Where she will deliver
- Support person
- Plan for finances, transportation and other preparations for delivery and complications
- Blood donation

vi. Drugs and Substance Abuse
Educate woman on: -
- Antenatal drugs why they are given, how they should be taken
- Abuse/misuse of drugs and herbs
- Alcohol should be avoided during pregnancy
- Harmful consequences of smoking
- Skin bleaching

vii. Explain effects of sexually transmitted infections and HIV/AIDS
- Educate mother on: -
  - Factors affecting mother to child transmission of HIV
  - Prevention of STIs including HIV
  - Benefits of HIV testing

g. Prescribe/Administer the following:
i. Oral Iron 60mg daily / Folate 0.5mg daily (Non–anaemic clients)

ii. Anti malaria drugs. All pregnant women should receive 3 doses of sulphadoxin pyramethamine at least one month apart from 16 weeks /quickening to 36 weeks (except those with G6PD deficiency
A single dose consists of 3 tablets of sulphadoxin 500 mg-pyremethamine 25mg (SP)
Health care provider should dispense and directly observe client-taking dose. (DOT)
iii. Antihelminthic Mebendazole 500mg stat. after first trimester
iv. Give Tetanus-toxoid immunisation (See schedule below):

TT1	First ANC visit
TT2	At least Four weeks after TT1
TT3	Six months after TT2
TT4	One Year after TT3
TT5	At least One year after TT4

At the end of this first visit, all information gathered through history, physical examination, laboratory and other investigations should be fully documented and carefully analysed to plan subsequent care of the client. Clients with normal healthy pregnancies will follow the routine protocols and visit schedules. Those with identified complications will be managed accordingly (See pages 16-53)

2. SUBSEQUENT VISITS: At every subsequent visit, refer to previous antenatal notes, findings and decisions made

a. History:
i. Ask about general health status since last visits
ii. Ask about any present complains
iii. Ask about foetal movements if gestation is more than 20 weeks
iv. Follow up on any previous problems identified and/or treated at earlier visit.

b. Physical Examination:
i Check blood pressure, and measure weight

ii Look for anaemia, malnutrition, goitre, fever, signs of pre-eclampsia and signs of physical abuse.

c. Obstetric Examination: measure symphysio-fundal height and compare with gestational age, Fetal heart rate and in the third trimester determine lie, presentation, position and descent.

d. Laboratory Investigations:
   I. Test urine for sugar and Protein
   ii. Test blood for Hb (at 28 weeks and 36 weeks, or more frequently if indicated)

e. Routine Administration of Drugs:
   i. Re-supply enough of iron/folate to last till the next visit and anti-malaria's as necessary and give IPT
   ii. Give Tetanus toxoid immunisation if indicated
   iii. Commence ARV prophylaxis at 28 weeks / ART where indicated

f. Client education: See principles of client education as outlined above

2nd Trimester

i) Ask woman about any concerns
ii) Ask woman about progress made towards birth preparedness and complication readiness
iii) Reassess woman's knowledge of danger signs
iv) Treat other topics not dealt with previously
v) Re-educate woman on any other relevant health issues
vi) Discuss discomforts of pregnancy
vii) Discuss sexual activity and safer sex
viii) Discuss what to expect during labour, preparations for delivery

NB: - In general weight gain should not exceed 0.5 kg weekly, after 20 weeks of pregnancy.

3rd Trimester

i. Ask woman about any concerns
ii. Ask woman about progress made towards birth preparedness and complication readiness
iii. Reassess woman's knowledge of danger signs
iv. Educate woman on symptoms of labour and care during labour
v. Educate woman on breast feeding/ breast care
vi. If mother is HIV positive, counsel on infant feeding options
vii. Educate woman on family planning: child spacing and methods
viii. Educate woman on neonatal care, immunization schedule and danger signs in the newborn

EXERCISES TO STRENGTHEN MUSCLES Used during Pregnancy and Delivery (cont'd)

At each subsequent ANC visit, information gathered through history physical examination and laboratory investigations for each client should be carefully analysed to determine if pregnancy is progressing normally or if new complications have developed. Complications identified should be managed as per protocols .

EXERCISES TO STRENGTHEN MUSCLES
Used during Pregnancy and Delivery

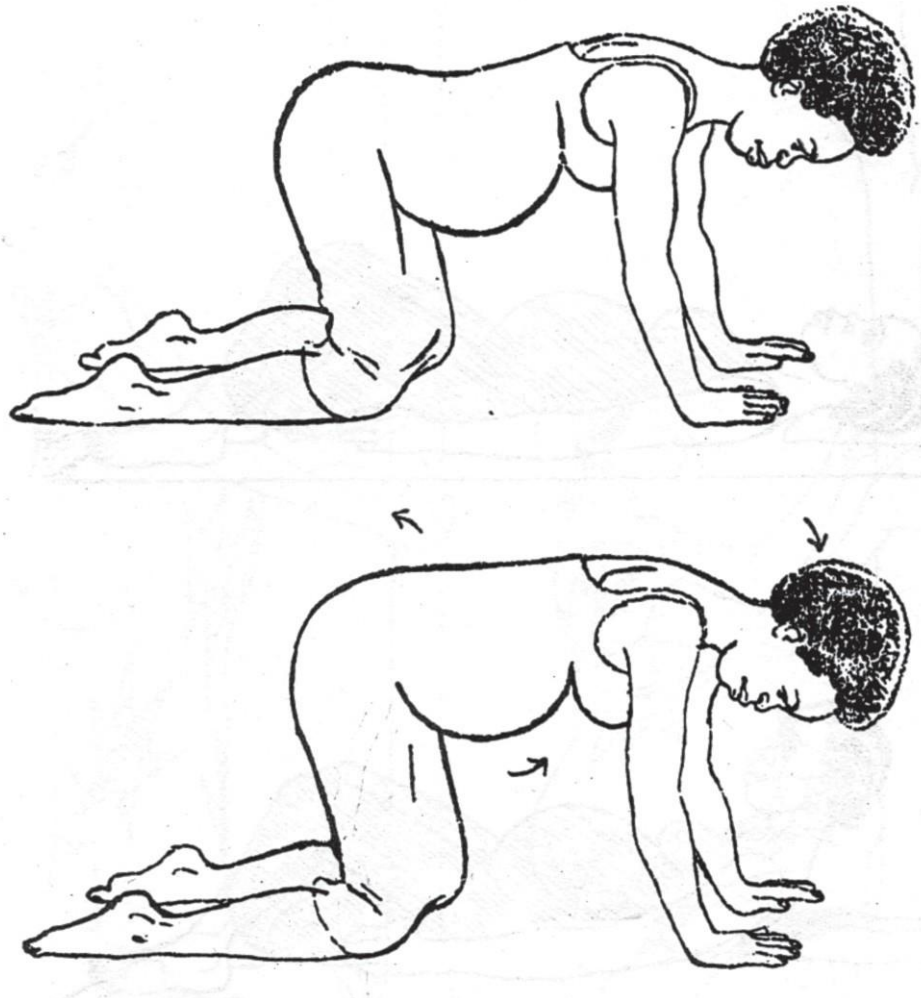

Fig. 2

Pelvic Rock (Helps relieve backache and pressure in a abdomen, and strengthens muscles in abdomen)

1. Get down on your hands and knees, as shown in top figure.
2. Pull in your abdomen and lift your buttocks, as shown in bottom figure. Hold for a count of 5.
3. Gently relax your abdomen and buttocks, allowing the curve of your back to return.
4. Repeat 5-6 times.

EXERCISES TO STRENGTHEN MUSCLES
Used during Pregnancy and Delivery (cont'd)

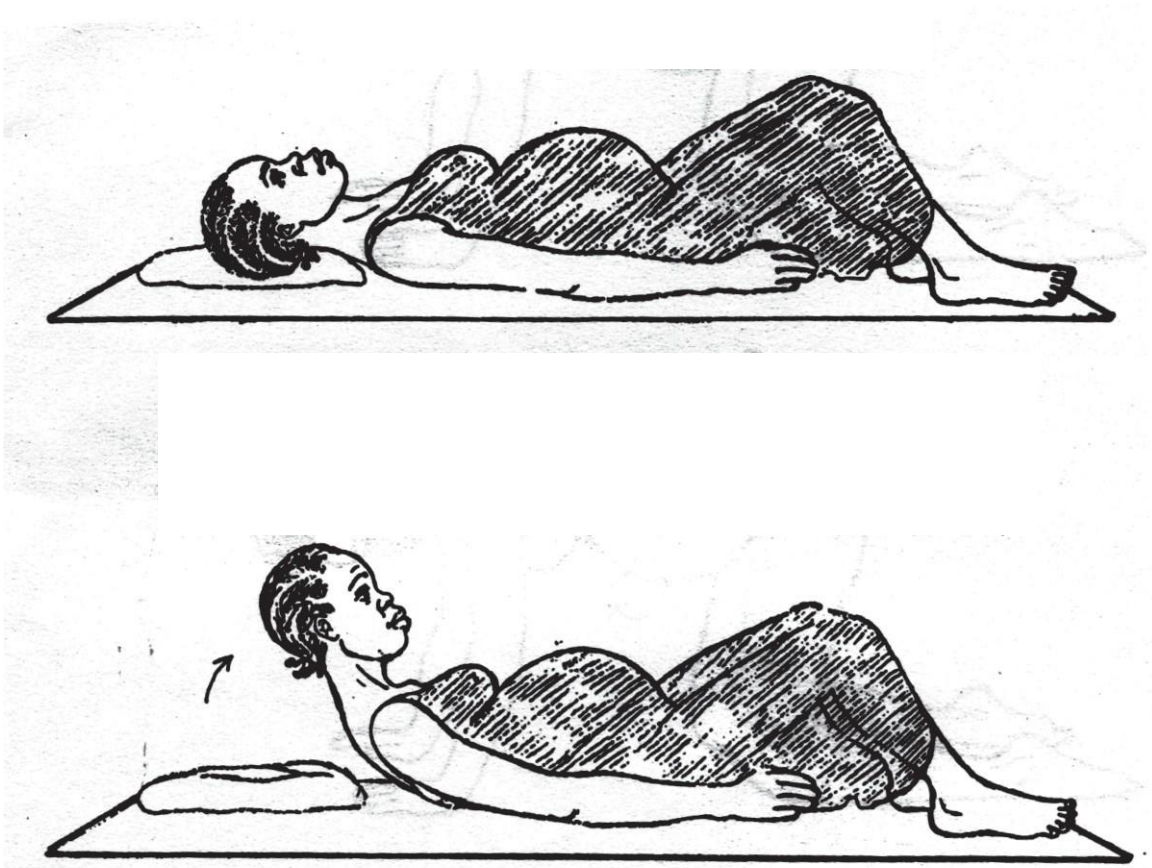

Fig. 3

Head and Shoulder Lift (Strengthens muscles in abdomen)

1. Lie on your back with your knees bent, feet flat on the floor, and your arms at sides as shown.
2. Raise your head and shoulders and tighten your abdominal muscles. Hold for count of five (5). Do not hold your breath.
3. Lie back and relax.
4. Repeat 5-10 times.

EXERCISES TO STRENGTHEN MUSCLES
Used during Pregnancy and Delivery (cont'd)

Fig. 4

Squat (Strengthens leg muscles)

1. Stand while holding on to something to help you keep your balance. Keep your feet apart.
2. Slowly bend your knees keeping your back straight and keeping your knees and feet apart.
3. Rise slowly, keeping hold of the object for balance.
4. Repeat 3-5 times.

Note: You should not do this exercise if your knees hurt.

EXERCISES TO STRENGTHEN MUSCLES
Used during Pregnancy and Delivery (cont'd)

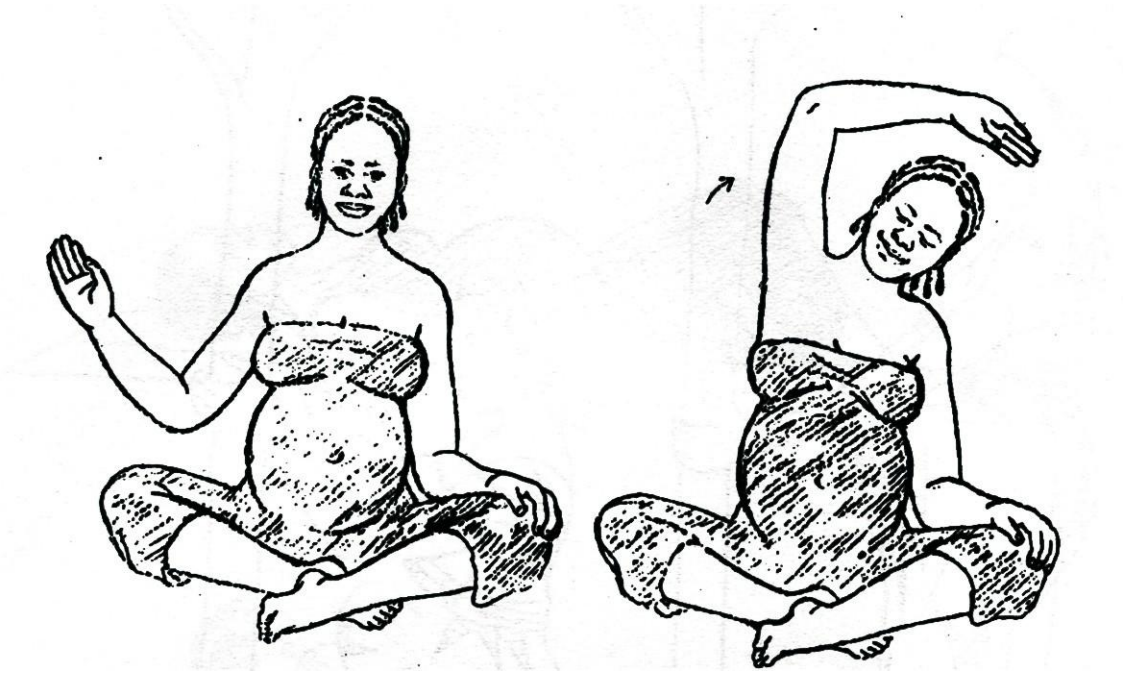

Fig. 5

Rib Cage Lift (Strengthens leg muscles and makes it easier to breathe)

1. Sit with your legs crossed as shown.
2. Curve your arm over your head it, and then return to the original position.
3. Repeat 4-5 times, then do the same with other arm.

Kegel Exercise (Strengthens muscles that help make delivery easier, and reduces the chance of complications during delivery).

1. Tighten the muscles around your anal opening and in your vagina (as if you were holding back urine). Hold for a count of three, then relax.
2. Repeat 5-10 times. This exercise can be done anytime during the day when you are sitting down.

NOTE: There is no illustration for the Kegel exercise

C. KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
1. Anaemia haemoglobin less then 11g /dl Moderate 7-11g/dl Severe less than 7g/dl	⇒ Ask for symptoms: • Feeling tired or breathless on the slightest exertion Palpitation or dizziness ⇒ Examine the conjunctiva, tongue, palms and nail beds for pallor; if anaemia present: ⇒ Counsel client to eat food rich in iron/folate and Vitamin C ⇒ REFER Prepare Blood donors to accompany patient if severe	Same as level A ⇒ Assess client for severity and possible cause of anaemia ⇒ Do laboratory investigations to confirm severity and cause • Hb • Sickling • Bf for mps • Stool RE • Urine RE If Gestation is greater than 28 weeks and/or Client has symptoms of severe anaemia and/or HB is less than 7g/dl REFERto Level C If Hb is 9-I1gm/dl:- ⇒ Advise on diet ⇒ Treat Anaemia Iron 60mg bid ⇒ Folate 0.5mg daily ⇒ Multivitamins tid ⇒ Give broad spectrum anthelmintics if indicated(mebendazole 500mg stat) ⇒ Check Hb 2 weeks if Hb drops further or remains unchanged ⇒ Prepare blood donors and REFER If Hb improves continue Iron/Folate diet and monitor fortnightly until Hb is greater than 10g/dl NB: If Hb is less than 7g/dl at term REFER	⟶ Same as level B ⟶ Diagnose cause and type of anaemia with laboratory investigations, including: • FBC • Sickling • Bf for mps • Blood grouping • Blood film comment • Hb Electrophoresis • G6PD • Stool RE ⇒ Depending on gestational age and severity of anaemia, treat with oral iron and folic acid, or blood transfusion (when severe) ⟶ Treat associated conditions (e.g., malaria intestinal parasites) ⟶ Monitor Hb level closely for improvement ⟶ Advise on place of delivery if near term. ⟶ Ensure availability of donor blood if near term

KEY:
⟹STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
2. Hypertensive Disorders in Pregnancy Pregnancy Induced Hypertension (PIH) Two readings of diastolic BP greater than 90mmHg NO PROTEINURIA	If BP is equal or above 90mmhg, ⟹ Look for oedema of feet, hands, face, ankles (e.g. rings too tight for fingers. or shoes too tight) ⟹ Ask client if experiencing severe headaches, blurred vision or epigastric pain: if any of these signs present ⟹ REFER If any of the above accompanied by support person / service provider	Screen as for level A ⟹ Measure blood pressure in sitting position (recommended) If diastolic blood pressure is greater than or equal to 90mmHg, repeat after one hour rest. If diastolic blood pressure is still greater than or equal to 90mmHg, ask the woman if she has: - • Severe headache • Blurred vision • Epigastric pain and • Check protein in urine Assess condition; if BP diastolic more than or equal to 90mmHg ⟹ Counsel to reduce workload and to rest ⟹ Counsel on danger signs ⟹ REFER If diastolic is = 110 follow Nifedipine Regime <u>Nifedipine Regime</u> • 10mg sublingual stat • Check BP every 15 minutes • If BP is equal to or less than 90mmHg, remove capsule • Repeat after 30 minutes if necessary but do not allow diastolic to fall below 90mmHg	Same steps as for Level B ⟹ Counsel on bed rest, balanced diet ⟹ Educate on signs of pre-eclampsia ⟹ Monitor weekly: fetal growth and well being – ⟹ Daily urine testing for protein, 4 hourly BP If BP worsens Diastolic more than or equal to 110mmHg ⟹ Stat anti-hypertensives (e.g. Hydralazine, Nifedipine,), but do not allow BP to drop too quickly (below 90mmHg) • If Urine Protein Positive manage as per Pre-eclamspsia (page 18) • If fetal growth Restriction admit to hospital for assessment and expedite delivery • If all observations remain stable monitor and deliver at 38 weeks. Refer annex ….on page 122 <u>Hydralazine Regime</u> If diastolic blood pressure is greater than 110mmHg: - ⟹ Give hydralazine 5mg IV slowly (3 – 4 minutes) if IV not possible give IM If diastolic blood pressure remains greater than 90mmHg, repeat the dose at 30 minutes intervals until diastolic BP is around 90mmHg Do not give more than 20mg in total.

⇒ KEY:
STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
3. Mild Pre eclampsia Two readings of BP Diastolic of 90-110 mmHg taken four hours apart with Proteinuria of 1+ and 2+	If BP is more than 90 diastolic ⇒ Look for oedema of feet, hands, face, ankles (e.g. rings too tight for fingers or shoes too tight) ⇒ Ask client if experiencing severe headaches, blurred vision or epigastric pain ⇒ REFER accompanied by support person/ service provider	Same as for community level ⇒ Educate patient on danger signs: • Headaches • Epigastric pain • Blurring of vision or flashes of light ⇒ Check BP and Urine ⇒ REFER immediately	If gestation is less than 37 weeks and signs remain unchanged or normalize monitor twice weekly as outpatient ⇒ Monitor BP 4 hourly, and assess: • Urine protein, • Reflexes • Fetal condition ⇒ Counsel woman on danger signs and encourage normal diet. If diastolic is >100mmHg start Antihypertensives, (page 17) If urinary protein increases or BP worsens manage as severe pre-eclampsia If gestationis more than 37 completed weeks and foetal conditions are normal deliver by the safest and quickest means If gestation is more than 37 completed weeks and there are signs of foetal compromise (signs of foetal distress, foetal growth restriction, reduced foetal movement) deliver c-section. If the gestation is <37 weeks and mother condition is worsening or baby is small for date, ⇒ Deliver by C/S NOTE: - Low salt diets and diuretics do not help pre-eclampsia and could be harmful to the mother and baby.

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STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
4. Severe Pre-eclampsia Diastolic BP of 110 mmHg or more Proteinuria 3+ or more	Woman complains of severe headaches blurred vision, face and hands swelling, or upper abdominal pain ⇒ REFER Immediately accompanied by support person and service provider	⇒ REFER TO LEVEL C accompanied by Health Worker Before transfer: - ⇒ Start resuscitation with IV infusion of Normal Saline or Ringers Lactate at the rate of 30 drops/minute ⇒ Pass Urinary catheter and monitor urine output. ⇒ Monitor fluid balance ⇒ Check and record BP every 15 - 30 minutes ⇒ Monitor respiratory rate and reflexes ⇒ Start Sublingual Nifedipine 10 mg ⇒ Start Mg SO4 protocol and document doses (see pages 20, 122) If in labour but not near second stage: ⇒ REFER immediately accompanied by midwife If in labour and is near delivery Deliver by Vacuum extraction when in second stage ⇒ Conduct active management of third stage of labour (DO NOT GIVE ERGOMETRINE) ⇒ Transfer to Level C after delivery	Note: Monitor patient very closely:- Take ⇒ Blood pressure every 15 to 30 minutes until diastolic blood pressure is stable at 90 – 100 mmHg. Then check 4 hourly ⇒ Check vital signs e.g. RR, Pulse every 15 to 30 minutes until patient is stable. Then check 4 hourly Temp, ⇒ Check Urine output hourly and test for urine protein daily ⇒ Check Reflexes hourly until patient is stable. Then check daily ⇒ Monitor for Fits ⇒ Perform Laboratory Investigations (if possible) Hb, Platelet Count, BUN, Uric acid, LFT, Bed Side Clotting Test, Urine protein, Blood grouping X-matching, ⇒ Give or continue MgSO4 as per protocol ⇒ Give or continue Antihypertensive (Nifedipine, Hydralazine, Aldomet) as per protocols If NOT in Labour ⇒ Expedite delivery within 24 hours If maternal and fetal condition is stable and Cervix is favourable attempt vaginal delivery

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COMPLICATION	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		Note: During transfer monitor IV infusion ⇒ Urine out put ⇒ Keep record of all IV fluids, medications given, time of administration and the woman's condition.	If maternal and /or fetal condition is poor ⟶ Or cervix is unfavourable deliver by CS I in labour but not near second stage ıonitor progress of labour, maternal and fetal condition closely. Deliver by /acuum when in second stage. ⟶ Conduct active management of third stage (DO NOT GIVE ERGOMETRINE)

Magnesium Sulphate Protocol

⇒ Give 4g of magnesium sulphate IV (20ml of 20% solution) IV slowly over 5 – 10 minutes (woman may feel warm during injection)
⇒ Give 10g of magnesium sulphate IM: give 5g (10ml of 50% solution IM deep in upper outer quadrant of each buttock with 1ml of 2% lignocaine in the same syringe)
⇒ Maintenance dose: 5gm IM every 4 hours. into alternate buttocks Continue MgSO4 until 24 hours after delivery or last fit

Note
If respiratory depression (breathing less than 16/ minute) occurs after magnesium sulphate, or abscence of reflexes or oliguria do not give any more magnesium sulphate. Give the antidote: calcium gluconate 1g IV (10ml of 10% solution) over 10 minutes.

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COMPLICATION	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/ COMMUNITY MIDWIFE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
5. Eclampsia BP Diastolic more than 90mmHg Plus Proteinuria 2+ Plus Convulsions	If woman is having fits: woman found unconscious or fitting soon after delivery ⇒ Prevent her from hurting herself; ⇒ Remove sharp or dangerous objects from near patient ⇒ Do not restrain her ⇒ When fit is over, place her on her side to prevent her from choking on vomit; then ⇒ REFER Urgently and accompany patient	AT LEVEL B MANAGE AS PER SEVERE PRE-ECLAMPSIA AND REFER TO LEVEL C Plus ⇒ Call for help to mobilise all available personnel ⇒ Make rapid assessment of patients general condition including vital signs and history from relatives ⇒ Gather resuscitation equipment (airway, suction oxygen, eclampsia pack) ⇒ After convulsion aspirate mouth and throat if necessary ⇒ Never leave patient alone, provide constant supervision If Eclampsia is diagnosed: severe ⇒ Monitor closely as pre-eclampsia protocol ⇒ Start MgSo4 and Antihypertensive protocols ⇒ Start Broad Spectrum antibiotics ⇒ Expedite delivery within 12 hours: If in second stage: deliver by Vacuum extraction ⇒ Manage third stage Labour with OXYTOCIN (No ergometrine) ⇒ Post Delivery Monitoring: Continue to monitor patient closely ⇒ Continue MgSo4 until 24 hours after delivery or last fit. ⇒ Continue SL Nifedipine or IV Hydralazine until BP stabilised and patient fully Conscious then change to oral antihypertensives ⇒ Monitor fluid balance and urine output closely. If delivery is not anticipated within transfer time: Transfer to Level C	Manage as for level B If delivery not anticipated within 12 hour deliver by CS ⇒ Manage third stage Labour with OXYTOCIN (No ergometrine) ⇒ Post Delivery Monitoring: Continue to monitor patient closely ⇒ Continue MgSo4 until 24 hours after delivery or last fit. ⇒ Continue SL Nifedipine or IV Hydralazine until BP stabilised and patient fully Conscious then change to oral antihypertensives ⇒ Monitor fluid balance and urine output closely. If renal failure (urine output < 30ml per Hour) or other complications. Refer to next level DIURETICS (frusemide) may be used only if renal failure or pulmonary oedema is strongly suspected. Note: Rule out other causes of fits (e.g. cerebral malaria, meningitis)

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
6. Chronic /Essential Hypertension BP diastolic more than 90mmHg Before 20 weeks gestation	ASK: If Client is known to have hypertension prior to becoming pregnant ⇒REFER to level B	If known Hypertensive on treatment ⟶ Counsel her on: • Need for additional rest • Signs/Symptoms of worsening hypertension ⇒ Check BP, Urine Protein ⇒ REFER to Level C If BP worsens and/or Proteinuria develops Manage as per severe Pre-eclampsia–Protocolsee page 123	Same as Level B Plus Investigate for cause of Hypertension if necessary ⇒ Evaluate cardiovascular system ⇒ Do laboratory investigations • Urea • Creatinine • Uric acid levels If client was on anti-hypertensive medication before pregnancy and BP was well controlled continue same medication if drug is known to be safe for use during pregnancy Start Antihypertensive medication if BP poorly controlled: i.e. If BP diastole >100mmHgor more or BP Systolic >160. (Recommended drugs are Aldomet and Nifedipine) AVOID DIURETICS ⇒ Plan regular ANC visits schedule with client • Monitor BP •Urine Protein • fetal growth and condition If proteinuria develops consider Super imposed pre-eclampsia and manage as above

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
7. FEVER IN PREGNANCY Temp more than 38°C	⇒ Check for • fever • general malaise, • headache • loss of appetite • vomiting: ⇒ Reduce high temperature by sponging ⇒ Give paracetamol 1gtid ⇒ Encourage fluid intake ⇒ REFER	SAME AS LEVEL A plus Make differential Diagnaosis (Malaria, Urinary tract infection, Respiratory tract infection, Meningitis, Hepatitis, Typhoid) ⇒ Take History ⇒ Examination; Vital signs, neck examination ⇒ Chest (respiration rate, air entry, abnormal sounds) ⇒ Abdomen (tenderness and enlargement, liver, spleen, Renal angle) ⇒ Examine for renal angle tenderness, check wellbeing of foetus ⇒ Inspect Genitalia for discharge ⇒ Do Laboratory Examination: Hb, WBC, MPs, Urinalysis ⇒ Manage as per cause or refer to higher level as appropriate	

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CEN TRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
8. Uncomplicated Malaria Fever Plus Chills Bodily aches Rigors Headache Vomiting Loss of appetite Bitter taste in mouth	⇒ Ask about symptoms ⇒ Assess gestational age If in first trimester ⇒ Give quinine tablets 600mg tid for 7 days ⇒ Give paracetamol 1g tds for 3 days ⇒ Tepid sponging ⇒ Encourage fluids intake ⇒ Monitor, if no improvement refer to level B Second to third trimester ⇒ Give artesunate 100mg and amodiaquine 300mg twice daily for 3 days Monitor: If no improvement after 24 hour Refer to level B	⇒ SAME AS FOR LEVEL A If lab available: • Check for malaria parasites, • Check for anaemia: Hb, • Check for other causes of fever: WBC, urine RE —›Monitor fetal Well being If persistent vomiting: ⇒ Rehydrate: ORS fluids Dex/Saline: IV ⇒ Give Paracetamol treatment (1g tds ×3) ⇒REFER to level C If no improvement after 48hour or other complications develop • Persistent vomiting, • Persistent Temp more than 38°C • Severe anaemia • Jaundice • Coca Cola Urine • Drowsiness • Poor urine output • Fetal death	⇒ SAME AS FOR LEVEL B ⇒ Investigate further and treat cause of fever if no improvement ⇒ Manage other complications

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
9. Complicated Malaria Signs And Symptoms As In Uncomplicated Malaria Persistent vomiting Persistent temperature more than 38°C Severe anaemia Jaundice Coca cola urine Drowsiness Poor urine output Fetal demise Convulsion	⇒ Carry out tepid sponging ⇒ REFER	⟶ Do lab investigation, • Full blood count, • Bf for mps • Urine analysis ⟶ Carry out tepid sponging ⟶ Give IV fluid with quinine 600mg Or 1M quinine ⟶ Give paracetamol 1g stat if conscious and ⟶ REFER	As for level B plus ff laboratory test • Urea electrolytes • Liver functioning test • Blood for grouping and x matching • Check random blood sugar ⇒ Give anti malaria treatment ⇒ Give IV infusion or IM quinine 600mg 8 hourly until patient can take orally

<u>Quinine Protocol</u>

⇒ Quinine 600mg in IV infusion to run at 30 drops per minute
⇒ Give IV infusion, 3liters in 24 hours
⇒ Monitor fluid balance and urine output
⇒ Give ante convulsants where necessary
⇒ IV diazepam 10mg. (refer to diazepam protocol)

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
10. Urinary Tract Infection (UTI) Fever plus Painful urination Frequent urination And urgency Supra pubic pain Back / loin pain Abdominal pain Nausea/ vomiting	Ask about symptoms: • Woman complains of pain or difficulty with urination • Fever, Ioin pains: • Nausea, and/or vomiting: ⇒ Reduce high temperature by sponging ⇒ Give paracetamol 1g tid ⇒ Encourage fluid intake ⇒ REFER	Same as for Level A plus ⇒ Ask about pain in the flanks (kidney area) If pain present REFER ⇒ Do laboratory investigation • Urine RE • Full blood count If UrineRE show pus cells >10/45s Protein +, RBC+ Bacteria present FBC shows raised WBC count >10000 ⇒ Start Broad spectrum Antibiotics Caps Amoxicillin 500mg tid for 7 days or Tab Nalidixic acid 1gqid for 7 days ⇒ Encourage Increased fluid Intake ⇒ Advise to avoid intercourse during treatment ⇒ Check for fetal well being If symptoms persist after 72 hours REFER If patient improves Continue treatment Repeat Urine RE one week after treatment to confirm cure If recurrent UTI ⇒REFER	Same as Level B Plus ff laboratory tests • Take urine for culture and Sensitivity • Take Blood for Urea/Creatinine If Culture Result is not available and Pyelonephritis is suspected and Patient has persistent vomiting ⇒ Start IV Antibiotics IV Ampicillin 2g qid Plus IV Gentamicin 80mg bid Until Patient is fever free for 48 hours then Oral amoxicillin 1g tid ×5 Or IV Zinacef 750g 8 hourly until fever free for 48hours, then tabs 250g bd ×5 If culture results become available treat accordingly ⇒ Encourage Increased fluid Intake ⇒ Repeat Urine RE /CS one week after completion of treatment to confirm cure. ⇒ Ensure vigilant maternal and fetal monitoring throughout the pregnancy If UTI is recurrent* ⇒ Consider prophylactic antibiotics – oral amoxicillin 250mg daily till the end of pregnancy and up to two weeks after delivery ⇒ Or Refer to Higher level *Note: prophylaxis is indicated after recurrent infections not after a single episode.

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
11. Vaginal Bleeding in Pregnancy (During first 28 weeks)	If any bleeding from vagina: Ask about amount Organise blood donors to accompany patient ⇒ REFER (Accompany patient to the next level) (Do not perform vaginal exam)	LEVEL B ⇒ Take history Assess severity of bleeding ⇒ Evaluate quickly general condition of patient ⇒ Check - Pallor, pulse, BP, Temp ⇒ Examine Abdomen: gestational age, fetal heart sounds, tenderness, distension Inspect Vulva/ Vagina: Severity of bleeding, ⇒ Do speculum examination to check state of cervical os and presence of Product of Conception (POC) ⇒ Perform Bimanual examination to assess • Size and position of uterus • For masses or tenderness in adnexia and Pouch of Douglas (POD) • Cervical excitation If in shock or Bleeding profusely: Mobilize help (Take blood sample for grouping/Xmatching to be doneat level C) UrgentlyResuscitate ⇒ Start IV Fluids: Normal Saline/ Ringers lactate First 1000 ml in 15 – 30 min Second 1000 mls in the next hour Identify cause of Bleeding/ Type of Abortion Manage according to cause	Manage as in level B Plus ⇒ Request for Laboratory / other investigations if available • Urine pregnancy test • Hb, WBC, Blood grouping and Xmatching Do ultrasound for fetal viability (and to rule out ectopic and molar pregnancy) ⇒ Manage according to cause

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
12. Threatened abortion SUSPECT WHEN: Light to moderate bleeding Closed cervical Uterine size corresponds to dates Uterus softer than normal Slight cramping or lower abdominal pain	⇒ Ask about amount of bleeding If Slight (less than two pad changes in 24 hours) ⇒Encourage fluid intake And ⇒REFER If bleeding is Heavy ⇒ Organise blood donors and ⇒ REFER (accompany patient to the next level) (Do not perform vaginal exam)	⇒ Take history ⇒ Assess severity of bleeding ⇒ Evaluate quickly general condition of patient ⇒ Check - Pallor, pulse, BP, Temp ⇒ Examine Abdomen: gestational age fetal heart sounds tenderness, distention Inspect Vulva/ Vagina: ⇒ Do speculum examination to check state of cervical os and presence of POC ⇒ Perform Bimanual examination to assess • Size and position of uterus • For masses or tenderness in a dnexia and Pouch of Douglas, cervical excitation If in shock or Bleeding profusely: Mobilize help (Take blood sample for grouping/Xmatching at level C) UrgentlyResuscitate ⇒ Start IV Fluids: Normal Saline/ Ringers lactate First 1000 ml in 15 – 30 mins Second 1000 mls in the next hour ⇒ REFER LEVEL C	Same as for Level B plus Do laboratory/other investigations including: • Pregnosticon test • Hb, Blood grouping/xmatching, • Ultra sound for fetal viability, ectopic, Molar Pregnancy ⟶Give Iron supplements :⇒Manage as in Level B

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		IF bleeding is mild ⇒ Advise to avoid strenuous activity and sex Advise on rest ⇒ Confirm pregnancy by pregnancy test if first trimester ⇒ Educate to report if bleeding worsens, in pain and febrile ⇒ Give paracetamol 1g tid for 3 days If bleeding Stops: ⇒ Monitor for foetal growth ⇒ Refer for ultrasound for fetal viability if available, start ANC ⇒ If bleeding worsens, Severe LAP, vesicles are seen and/or fever ⇒ Reassess for stage/type of abortion ⇒ Resuscitate if in shock or if bleeding is profuse (see page 28) Manage as per stage or type of abortion	

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
13. Inevitable abortion Moderate to heavy bleeding Dilated cervical Os Cramping or lower abdominal pain Tender uterus Products of conception not expelled	⇒ Ask about the amount of bleeding If Slight (less than two pad changes in 24 hours) ⇒ Encourage fluid intake + REFER If bleeding is Heavy Place patient in lying down position ⇒ Encourage fluid intake ⇒ Give Paracetamol for pain (two tablets) Organise blood donors and ⇒ REFER (accompany patient to the next level) (Do not perform vaginal exam)	⇒ Take history ⇒ Assess severity of bleeding ⇒ Evaluate quickly general condition of patient • Check - Pallor, pulse, BP, Temp ⇒ Examine Abdomen: • gestational age • fetal heart sounds • tenderness • distention ⇒ Inspect Vulva/ Vagina: ⇒ Do speculum examination to check state of cervical os and presence of POC ⇒ Perform Bimanual examination to assess • Size and position of uterus • For masses or tenderness in adnexa and Pouch of Douglas • Cervical excitation If bleeding is heavystart resuscitation Start IV Fluids: Normal Saline/ Ringers lactate First 1000 ml in 15 – 30 mins Second 1000 mls in the next hour If uterus is less 12 weeks gestation Plan for evacuation of uterine contents by MVA. If evacuation is not immediately possible arrange for EOU at level C.	SAME AS LEVEL B plus ⇒ Rescusitate if necessary ⇒ Do investigations • Blood: Hb Grouping and Xmatching ⇒ Transfuse if necessary If pregnancy is more than12 weeks Give Oxytocin Infusion 10-20 units in 500 mls Normal Saline/Ringers at 40/ drops per minute until expulsion of POC occurs OR Give misoprostol 200mcg vaginally or 400mcg orally every four hours until Expulsion of POC OR ⇒ Perform MVA

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		Before transfer ⇒ Give ergometrine 0.2 mg IM start (repeat in 15 minutes If necessary) Or Misoprostol 400mcg orally repeat Once after 4 hours if necessary ⇒ Start Antibiotic: caps Amoxicillin 1g stat If uterus is more than 12 weeks gestation Start ⇒ IV fluid infusion (NormalSaline/Ringers) Take ⇒ blood (for grouping/X matching at level C) ⇒ Give Oral or IM analgesics for pain ⇒ Give inj. ergometrine O.2mg if foetus has been delivered ⇒ Start Antibiotic: Amoxicillin 1g stat ⇒ REFER and accompany patient to level C ⇒ Ensure post abortion follow up: • Provide Family planning counselling • Treat Anaemia if indicated (Iron/ Folate) • Provide Grief Counsel	⇒ Give Antibiotics Amoxicillin 500mg Tid for seven days plus metronidazole 400 mg tid x 7 ⇒ Give Paractamol 1g Tid for 3-5 days ⇒ Ensure post abortion follow up • Provide Family planning counselling • Treat Anaemia if indicated (Iron/ Folate) • Provide grief Counsel NB: Refer to the next level if recurrent spontaneous abortion

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CEN TRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
14. Incomplete Abortion Moderate to Heavy bleeding Cervix open Uterus smaller than dates Severe LAP and Cramping Partial expulsion of POC	⇒Ask about the amount of bleeding If Slight (less than two pad changes in 24 hours) ⇒ Encourage fluid intake ⇒ REFER If bleeding is Heavy Place patient in lying-down position ⇒ Encourage fluid intake ⇒Give Paracetamol for pain (two tablets) ⇒Organise blood donors and REFER (accompany patient to the next level) (Do not perform vaginal exam)	⇒ Take history ⇒ Assess severity of bleeding ⇒ Evaluate quickly general condition of patient • Check - Pallor, pulse, BP, Temp • Examine Abdomen: • gestational age • tenderness • distention ⇒ Inspect Vulva/ Vag ina ⇒ Do speculum examination to check state of cervical os and presence of POC ⇒ Perform Bimanual examination to assess • Size and position of uterus • For masses or tenderness in adnexia and POD • Cervical excitation If bleeding is heavy and uterus less than 12 weeks gestation Start rescucitation as above ⇒ Evacuate uterine contents by MVA. ⇒ Give Antibiotis Amoxicilin 500mg tid x 7 If bleeding is light or moderate and uterus less than 12 weeks gestation ⇒ Use gloved finger or Sponge holding forceps to remove any visible products within vagina or cervical canal ⇒ Evacuate uterine contents by MVA.	SAME AS LEVEL B plus ⇒ Rescusitate if necessary ⇒Do investigations including Hb Grouping and Xmatching ⇒ Transfuse if necessary If pregnancy is more than 12 weeks ⇒ Give Oxytocin Infusion 20 units in 500 mls Normal Saline/Ringers at 40/ drops per minute until expulsion of POC occurs OR ⇒Give misoprostol 200mcg Vaginally or 400mcg orally every 4 hours until Expulsion of POC ⇒ Evacuate uterus with MVA if retained products ⇒ Give antibiotics Amoxicillin 500mg tid for 7 days plus metromidazole 400 mg tid x 7 Give Paracetamol

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		If evacuation is not immediately possible arrange for EOU at level C as soon as possible. Before transfer ⟶Give ergometrine 0.2 mg IM start (repeat in 15 minutes If necessary) Or Misoprostol 400mcg orally repeat once after 4 hours if necessary If pregnancy is more than 12 weeks gestation ⇒ Set an IV line (NSaline/Ringers lactate) ⟶ Take blood for grouping/X matching at level C ⇒ Give Oral or IM anaelgesic for pain ⇒ Give inj. ergometrine O.2mg ⇒ REFER and accompany patient to level C ⟶ Ensure post abortion follow up: ➖Provide Family planning counselling ➖Treat Anaemia if indicated (Iron/ Folate) ➖Provide grief Counselling ⟶ Refer to next level if recurrent spont abortions	Ensure post abortion follow up: • Provide Family planning counselling • Treat Anaemia if indicated (Iron/ Folate) • Provide grief Counsel Refer to next level if recurrent abortions

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE
15. Complete Abortion Light bleeding Closed cervix Uterus is smaller than dates Uterus softer than normal Light cramping History of expulsion of products of conception	⇒ Ask about amount of bleeding If Slight (less than two pad changes in 24 hours) ⇒ Encourage fluid intake ⇒ REFER If Heavy ⇒ Place patient in lying-down position ⇒ Encourage fluid intake ⇒ Organise blood donors and accompany patient to the next level ⇒ Give Paracetamol for pain (two tablets) (Do not perform vaginal exam)	Confirm diagnosis through history and examination ⇒ Observe for • Heavy vaginal bleeding • Anaemia • Fever • Severe abdominal pain • Offensive vaginal discharge If any of the above complication is present manage as per incomplete abortion or septic abortion (see page 32) ⇒ Ensure post abortion follow up: • Provide Family planning counselling • Treat Anaemia if indicated (Iron/ Folate) • Provide Grief Counselling Refer to next level if recurrent spontaneous abortions

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
16. Ruptured Ectopic pregnancy History of Amenorrhoea Lower Abdominal pains Fainting/Collapse Pallor Light to moderate Bleeding Fast Closed Cervix Uterus slightly bigger and softer than normal Tenderness and/or mass in adnexa Shifting dullness	If amenorrhoea or any irregular bleeding from vagina, with tenderness in the abdomen and/or sudden abdominal pain: ⇒Place patient in lying on the left side position, check BP + Pulse ⇒Organise blood donors and REFER (Accompany patient to the next level)	⇒ Do quick evaluation of patient • Check BP, temperature, pulse, • Assess abdominal tenderness, distended abdomen, Pelvic mass (If in shock; (Pale, BP less than 90/60,) Pulse is rapid more than 110 beats /min) ⇒ Take blood sample (for grouping and X matching to be done at level C) ⇒Set up IV line immediately and start resuscitation • Start IV Fluids: Normal Saline/ Ringers lactate at 40 – 60 drop per minute First 1000 ml in 15/30 minutes Second 1000 mls in the next hour ⇒Give anaelgesic if patient in pain (Paracetamol 2 tabs) ⇒ Organise blood donors and REFER immediately ⇒ Accompany patient.	Same steps as for Level B ⇒ Continue resuscitation ⇒ Request • Urgent Hb • Sickling • Cross blood-match ⇒ Arrange for immediate Laparatomy (DO NOT WAIT FOR BLOOD before performing surgery) ⟶ Transfuse if necessary At hospital discharge: ⇒ Educate on • Intraoperative findings • Future fertility implications • Probable risk for repeat ectopic ⇒ Give follow-up care • Grief counselling • Treat anaemia Iron /folate • Provide Family planning counselling

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
17. Molar Pregnancy Moderate to Heavy bleeding Partial expulsion of POC which resemble grapes/vesicles Excessive Nausea/vomiting Cramping Lower Abdominal Pain Early onset pre-eclampsia (Before 20 weeks gestation) No evidence of fetus Utems Soft	If any bleeding from vagina: Ask about amount If Slight (less than two pad changes in 24 hours) Encourage fluid intake ⇒ REFER If Heavy Place patient in lying -down position ⇒ Encourage fluid intake ⇒ Organise blood donors to accompany patient ⇒ Accompany patient to the next level ⇒ Give Paracetamol for pain (two tablets) ⇒ Keep sample of tissue passed for examination at level C (Do not perform vaginal exam)	⇒ Confirm diagnosis through history and examination ⇒ Arrange referral (Before transfer, If bleeding is heavy) ⇒ Start rescucitation as above ⇒ Take blood (for grouping/X matching at level C) ⇒ Give ergometrine 0.2 mg IM start (Repeat in 15 min if necessary) Or Misoprostol 400mcg orally repeat once after 4 hours if necessary ⇒ Start Antibiotic: Amoxicillin 1g ⇒ Keep sample of tissue passed for examination at level C	Same as level B plus ⇒ Continue Rescucitation ⇒ Do investigations: • Pregnosticon test with serial dilution/beta-HCG • Blood: FBCSickling, Grouping/ Xmatching • Pelvic Ultrasound if diagnosis is uncertain ⇒ Transfuse blood if necessary ⇒ Evacuate uterus by Suction under oxytocin infusion: Oxytocin 20 units in 500 ml N/S or R/L at 60 drops per minute once evacuation is under Way Note: uterus can be easily perforated if D & C is done Take specimen for histological examination Subsequent management: ⇒ Educate patient about need for long term follow up ⇒ Explain importance of avoiding pregnancy for one year. ⇒ Provide hormonal contraceptive ⇒ Treat anemia with Iron/Folate .

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COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
			⇒ Refer for specialist care if possible. If specialist care not accessible then: Follow up with urine pregnosticon test for one year as follows: • Weekly for first 4 weeks then • Two weekly for 2 months then • Monthly for 3 months then • Three monthly for 6 months If pregnosticon test remains positive after 8 weeks or becomes positive at any time during the period REFER for specialist care

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
18. Antepartum Haemorrhage (Vaginal bleeding in late Pregnancy) After 28 week and before delivery	If any bleeding from vagina: ⟶ Place patient in lying-down position DO NOT perform any vaginal Examination ⟶ Organise blood donors and accompany patient to next level ⟶REFER immediately	Same as for level A plus ⇒ Ask about amount of blood loss to assess severity of bleeding ⇒ Conduct physical examination ⇒ Check vital signs BP, pulse, respiration DO NOT PERFORM VAGINAL EXAMINATION If bleeding is slight patient is stable ⇒ Check Hb, sickling and blood group ⇒ Organise donors and REFER If bleeding is heavy and/or patient is in shock: (Pale, BP less than 90/60, Pulse is rapid more than 120 beats /, min) then treat for shock Refer (Management of Shock page 119) ⇒ REFER and accompany patient	Same as level B plus ⇒Continue resuscitation ⇒Reassess woman's condition ⇒Conduct physical examination Do Laboratory investigation: • Blood for Hb, grouping, X Matching • Clotting profile • Urine for protein ⇒ Determine cause and severity of bleeding ⇒ Transfuse if in shock, OR Hb less than 7g/dl ⇒ Do Utrasound to confirm cause of bleeding i.e., Placental praevia or abruption placenta and Fetal viability and maturity If ultrasound is not available, bleeding is slight or stops and patient is stable If the pregnancy is less than 37 weeks manage as placenta praevia until 37 weeks (See page 41) If pregnancy is 37 weeks perform examination under anaesthesia with double set up to exclude placenta praevia . ⇒ Manage according to cause (see Below)

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
19. Abruptio placenta (Vaginal bleeding in late Pregnancy: After 28 weeks and before delivery Bleeding may be concealed ie Retained inside the uterus Intermittent or constant abdominal pain Shock: may be out of proportion with visible blood loss Tense/ Tender Uterus Decreased or absent fetal movements Fetal distress of absent fetal heart sounds	If any bleeding from vagina: ⇒ Place patient in lying down position DO NOT perform vaginal examination ⇒Organise blood donors and accompany patient to next level ⇒ REFER immediately as above	If abruption is suspected: ⇒ Ask about amount of blood loss to assess severity of bleeding ⇒ Conduct physical examination ⇒ Check vital signs: BP, pulse respiration DO NOT PERFORM VAGINAL EXAMINATION If bleeding is light and patient is stable ⇒ Check Hb, sickling and blood group ⇒ Perform bedside clotting test –if clotting does not occur after 7 mins, or a soft clot that breaks down indicates coagulopathy ⇒ Organise donors and REFER If Bleeding is very heavy and /or Patient is in shock: (Pale, BP less than 90/60, pulse is rapid more than 120 beats / minute) ⇒ Treat for shock as above ⇒ Take blood (for grouping and cross-matching at Level C) (Do not give Colloids e.g. Dextran or Dicks Plasma)	Same as level B plus If bleeding is slight, maternal and fetal condition remain stable and gestation less than 37 weeks: ⇒ Admit and monitor mother and baby closely on ward for rest of duration of pregnancy Do laboratory investigations: • Hb, sickling, • Clotting profile • Urine protein • Group and cross matched blood and save 2 units ⇒ Correct anaemia: Iron /Folate or Transfuse if necessary ⇒ Check for pre-eclampsia 1. If bleeding is very heavy, or Maternal condition is poor, or Fetal distress Deliver quickly 2. If in labour, cervix is favourable, and or delivery is imminent; Augment Labour with Oxytocin infusion

KEY:
⇒ STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		Inspect perineum to see if presenting part is Visible and delivery imminent. Transfer to Level C quickly (Accompany Patient). If delivery is imminent (presenting part is visible, cervix fully dilated) ⇒ Deliver by Vacuum extraction ⇒ Perform active management of third stage (see page 69) After delivery of placenta set up infusion - 20 units oxytocin in 500ml Normal Saline at 20–40 drops /min for six hours. Monitor patient closely for ⇒ Vital signs ⇒ Look for signs of bleeding ⇒ Record urine output Transfer to level C and accompany patient	3. if not in labour or delivery not imminent Deliver by Cesarean Section If coagulopathy DIC, transfuse with fresh blood, fresh frozen plasma if available, IV tramezamic acid 1g 8hourly ⇒ Ensure continuing follow up postpartum to correct anaemia.

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
20. Placenta Praevia (Vaginal bleeding in late Pregnancy: After 28 weeks and before delivery Bleeding may be provoked by sex Shock is in proportion is visible blood loss Foetal condition is normal Abnormal Foetal lie and presentation Empty lower uterine pole Uterus is relaxed	As above If any bleeding from vagina: ⇒ Place patient in lying-down position DO NOT perform vaginal examination ⇒ Organise blood donors and accompany patient to next level ⇒ REFER immediately as above	If Placentapraevia is suspected: ⇒ Ask about amount of blood loss to assess severity of bleeding ⇒ Conduct physical examination ⇒ Check vital signs: BP, pulse respiration DO NOT PERFORM VAGINAL EXAMINATION If bleeding is light patient is stable ⇒ Check Hb, sickling and blood group ⇒ Perform bedside clotting test –if clotting does not occur after 7 mins, or a soft clot that breaks down indicates coagulopathy ⇒ Organise donors and REFER If Bleeding is very heavy and /or Patient is in shock: (Pale, BP less than 90/60, pulse is rapid more than 120 beats / minute) then treat for shock (Do not give Colloids eg Dextran or Dicks Plasma) ⇒ Take blood for grouping / X matching at level C ⇒ Inspect perineum to see if presenting part is visible and delivery imminent.	Same as for level B If bleeding is slight, maternal and fetal condition remain stable and gestation is less than 37 weeks: ⇒ Admit and monitor mother and baby closely on ward for rest of duration of pregnancy Do laboratory investigations: • Hb, sickling, • Have 2 units cross matched Blood ready ⟶ Correct anaemia: Iron /Folate or Transfuse if necessary ⟶ Do Ultra sound to determine type of praevia (if available) ⟶ Plan for delivery after 37 completed weeks

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		Transfer to Level C quickly (Accompany Patient). If delivery is imminent (presenting part is visible, cervix fully dilated) ⇒ Deliver by Vacuum extraction ⇒ Perform active management of third stage (see page 69) After delivery of placenta Set up infusion - 20 units oxytocin in 500ml Normal Saline at 20–40 drops /min for six hours. Monitor patient closely ⇒ Check vital signs every 15 minutes for 1 hour ⇒ Inspect vulva for any further bleeding ⇒ Record urine output hourly Transfer to level C and accompany patient	If bleeding is very heavy, and/or Maternal condition is deteriorating Consider use of steroids for foetal lung maturation if gestation is less than 34 weeks (Inj Dexamethasone 12 bid 24 hours) ⇒ Deliver by Cesarean section ⇒ Conduct follow up in postpartum ⇒ Correct anaemia.

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
21. Hyperemesis Gravidarum Excessive vomiting Generalised weakness	If woman complains of excessive vomiting during early pregnancy: ⇒ Encourage oral fluids ⇒ Encourage small, frequent feeds ⇒ Educate to avoid spicy and/or oily foods ⇒ Monitor progress; if no improvement after 24 hours: ⇒ REFER	Same as for level A plus ⇒Take history Ask frequency of vomiting ⇒Examine to assess severity of dehydration: • Look for sunken eyes • Monitor urinary output & test for Acetone Specific gravity • Assess skin turgo ⇒Do lab investigation to exclude other causes of vomiting: • Check blood for malaria parasites • Urine RE If dehydration is mild: ⇒ Provide reassurance, ⇒ Encourage intake of fluids, ⇒ Urge bed rest If severe: ⇒ Give IV fluids (N/saline, R/lactate, 5% Dextrose) ⇒ Monitor her BP, Pulse and urine output If symptoms persist after 24 hours ⇒ REFER to Level C	Same as level B ⇒ Take history and examine to exclude other causes of vomiting (e.g., appendicitis, hepatitis, malaria, obstructed bowel) ⇒ Do lab investigations: FBC, BF for mps, Liver function test, blood, urea, electrolytes and Creatinine Urine RE & CS ⇒ Do Ultrasound to exclude • Molar pregnancy • Multiple gestation ⇒ Monitor fluid intake and Urine output ⇒ Nil by mouth until vomiting controlled ⇒ Resuscitate with IV fluids (dextrose5%, N/saline or Ringer's lactate) ⇒ Give Anti emetics drugs: Promethazine 25- 50 mg bid, or Metoclopramide 10 mg bid ⇒ Give inj. vitamin B supplement If other cause of vomiting is identified treat appropriately. ⇒ Monitor client closely for progress of pregnancy

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITION/COMPLICATION

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
22. Premature Rapture of Membranes Rupture of membranes before the onset of labour	If woman complains of losing fluid from the vagina ⇒ REFER	⇒ Take history to determine duration of liquor leakage, gestational age, onset of labour. Examination: • Inspect Vulva to confirm diagnosis • Assess foetal maturity and well-being, e.g. fundal height, foetal heart beat, foetal movement • Signs of labour ⇒ Conduct sterile speculum examination ⇒ Assess mother for signs of infection • Fever, • Rapid pulse • Offensive liquor • Fetal distress ⇒ Start antibiotics Amoxicillin 500mg tid or Erythromycin 500 mg qid plus Metronidazole 400mg tid ⇒ REFER IF • Infection is present • Membranes ruptured for more than 24 hours • Fetal distress If contractions present do sterile vaginal examination: If cervix dilated, monitor for delivery If no delivery within 12 hours REFER	• Same as for Level B plus If membranes have been ruptured and gestationis less than 37 weeks ⇒ Assess and monitor mother and fetus carefully for infection, fever, rapid pulse, offensive liquor, fetal distress Do investigations: • Full blood count(FBC), urine RE, vaginal Swab for C/S • Ultrasound for fetal well being & liquor Volume If no signs or symptoms of infection and fetal condition is satisfactory ⇒ Start course of broad spectrum antibiotics (if not already done) Amoxicillin 500mg tid or Erythromycin 500 mg qid plus Metronidazole 400mg tid x5 days ⇒ Consider corticosteroids for foetal lung maturation(IM Dexamethasone 12 mg bid for 24 hours if gestation is less than 34 weeks) ⇒ Deliver at 36 weeks or earlier if necessary

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY LEVEL (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
			If signs of infection ⇒ Start Antibiotics course: IV ampicillin, IV metronidazole, IV gentamicin ⇒ Deliver immediately If gestationis more than 37 weeks ⇒ Deliver immediately (Aim for vaginal delivery) ⇒ Consider Cesarean section if fetal distress severe oligohydraminous or failed. induction.

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A TRADITIONAL BIRTH ATTENDANT (TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT
23. Vaginal discharge in pregnancy Vulvo -vaginitis Frothy or curdish discharge Vulva burning and itchiness Dysuria	If woman complains of vaginal discharge, vulvo itchiness or burning: ⟶ Educate on personal hygiene ⟶ REFER to level B	Same as level A ⇒ Take history for STI risk factors (history of STI symptomatic partners, new partners) ⇒ Examine external gentialia /speculum examinination to confirm discharge: ⇒ Take swab of vaginal discharge for laboratory analysis, if possible If Risk assessment is negative: Treat for Candidiasis, trichomonas and bacteria vaginosis give • Miconazole vaginal tablets 200 mg nocte x 3 or or 100 mg x 6 • Tab Metronidazole 400mg tid x5 or 2g start If Risk assessment is positive; Treat for candidiasis, trichomonas bacteria vaginosis, gonorrhoea an chlamydia • Miconazole vaginal tablets 200 mg nocte x 3 or 100 mg x 6 • Tab Metronidazole 400mg tid x5 or 2g start • Ceftriaxone 250mg IM start • Erythromycin 500mg qid x 7 days ⇒ Counsel on STI prevention and partner management ⇒ Ensure follow up to confirm success of treatment ⇒ REFER TO LEVEL C If symptoms persist after one week or recurs during pregnancy	Same as Level B plus If symptoms recur or persist: ⇒ Do laboratory investigations; ⇒ Take vaginal swab for c/s and microscopy to identify cause of infection Urine RE and c/s ⇒ Offer HIV Counselling & testing ⇒ Treat appropriately ⇒ Counsel on STI prevention and treat partner If HIV positive ⇒ counsel for PMTCT

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A TRADITIONAL BIRTH ATTENDANT (TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT
24. Uterine size bigger or smaller than gestational age Size of the uterus does not correspond to the gestational age of pregnancy reported by the woman or calculated from her last menstrual period (more than + /- 2 weeks)	Woman is not sure of duration of pregnancy ⇒ REFER TO LEVEL B	⇒ Take history • To confirm date of LMP • Determine onset of quickening or ask for presence of fetal movements • Ask for History of fibroids ⇒ Check maternal weight gain ⇒ Palpate abdomen to exclude • Molar pregnancy • Multiple pregnancy • Fetal death • Fibroids • Polyhydraminios If growth restriction is suspected recheck symphosio fundal height in two weeks if unchanged refer to LEVEL C ⇒REFER for ultrasound at level C (where possible) if LMP is undetermined OR If any of the above diagnosis are suspected. ⇒REFER	Same as level B plus Determine cause of discrepancy • Ultrasound investigation for: • Dating, • Viability, • Liquor volume, • Multiple gestation, • Pelvic tumour e.g. fibroids ⇒ Do Laboratory investigations: Hb, Sickllng, BF, for mps ⇒ Manage as per cause

KEY:
⟹STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

COMPLICATION/ PROBLEM	LEVEL A TRADITIONAL BIRTH ATTENDANT (TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT
25. Foetal Death Foetal movements not felt after 28 weeks gestation Fundal height decreases of remains unchanged No foetal heart sounds located Breast engorged with nipple discharging breast milk	Woman complains of not feeling fetal movements or of decrease in uterine size ⟹ REFER to level B	Same as level A plus: ⟹Take history • Ask onset of problem and any associated symptoms or illnesses • Ask of bleeding Liquor loss, Fever, Rashes and Previous stillbirth delivery ⟹ Perform Examination: Compare present symphisio fundal height to previously documented measurement ⟹ Auscultate for fetal heart sounds if gestation more than 20 weeks. (Ask for a second opinion to confirm) If less than24weeks do ultra sound or Doppler to access foetal sounds If Foetal heart sounds are absent and or decrease or lack of growth in uterine size ⟹ Explain problem to woman and support person ⟹ Give grief counselling ⟹ Educate on breast care if necessary ⟹ Refer to level C	Same as Level B plus ⟹ Confirm diagnosis and determine probable cause: - • Do Ultrasound: for Viability. If Ultrasound unavailable consider X ray if gestation is more than 28 weeks) ⟹ Perform Laboratory Exam: Hb, Sickling, BF mps, blood group and Rhesus factor, VDRL, FBS, Clotting profile. ⟹ Have 2 units of blood cross-matched blood and arrange for fresh frozen plasma ⟹ Plan delivery: - • Discuss with client expectant management (SVD) if duration of IFUD is less than 4 weeks and maternal condition is stable. If duration of IUFD is more than 4 weeks or if platelet count is low, or maternal condition is poor start antibiotics ⟹ Correct anaemia (transfuse Hb less than 7g/dl) ⟹ Ripen cervix (if unfavourable) ⟹ Induce labour with Oxytocin ⟹ Perform Cesarean section if Induction is not possible or fails monitor closely for PPH ⟹ Send foetus for autopsy if possible After delivery ensure follow up: ⟹ Provide emotional support ⟹ Give grief counselling ⟹ Educate on breast care ⟹ Suppress Lactation using firm tight brassiere/ bromocriptine ⟹ Educate on cause of IUFD and future obstetric implication ⟹ Refer to next level if IUFD is recurrent

D.

COMMON DISCOMFORTS DURING PREGNANCY

Signs And Symptoms	Anatomic/Physiologic Basis	Prevention And Relief Measures Provide Reassurance	Alert Signs That May Indicate A Problem. Client To Report For Care
Abdominal (groin) pain Cramps Twinges/sharp pains Pulling sensations or sudden pain on the sides of the lower abdomen. Most commonly occurs during 2nd – 3rd trimester	Enlarged uterus stretches surrounding ligaments and muscles	⇒ Review the anatomic/physiologic basis with the woman and advise her and partner as follows: • Lie on the side with knees and hips bent • Place a pillow between the knees and another pillow under the abdomen When pain becomes bothersome try any of the following: • Gently massage or apply firm pressure over the painful area. • Apply warm cloth or take warm baths • Sit or lie down • Flex the knees onto the abdomen	Loss of appetite may indicate appendicitis Upper abdominal pain that may be relieved by food but re-occurs 2-3 hours later with, Loss of appetite Nausea or vomiting Intolerance to fatty foods may indicate gall bladder disease or peptic ulcer
Breast Changes Bilateral increase in size Tenderness or tingling Thin, Clear yellowish nipple discharge	Hormonal changes cause various breast changes in preparation for breast feeding	⇒Review the anatomic / physiologic basis with the woman and advise her and partner as follows: • Wear a well fitting bra while sleeping • Keep nipples dry and clean to protect from infection • Return for care if signs and symptons worsen	A lump Dimpling/puckering Redness Sores Rashes Area of scaliness Above may indicate carcinoma
Leg Cramps Onset is sudden and duration short. Most commonly occurs during the 2nd and 3rd trimester	Unclear cause Occasionally from pressure of foetal head on nerves as head descends	⟶Review anatomic/physiologic basis with the women and advise her and partner as follows: I pain becomes troublesome • Gently massage or apply firm pressure over the painful area • Straighten knee and flex foot upward • Stand on toes of affected leg and press firmly toward the floor	Localized pain over a vein Swelling of the affected limb may indicate thrombosis Calf muscle tenderness Swelling of the affected limb may indicate deep vein thrombosis Numbness/tingling of fingers and toes

COMMON DISCOMFORTS DURING PREGNANCY

Signs And Symptoms	Anatomic/Physiologic Basis	Prevention And Relief Measures Provide Reassurance	Alert Signs That May Indicate A Problem. Client To Report For Care.
		-Take frequent breaks from sitting or standing for long periods Return for care if signs and symptoms worsen	
Swelling (oedema) of ankles and feet Appears at the end of the day, after sitting or standing for a long time Disappears after rest or elevating feet Most commonly occurs during the 2nd – 3rd trimester Hormonal Changes Hormonal changes relax smooth muscles slowing digestion and elimination Slowed digestion increases water absorbed from colon	Hormonal changes cause: - Increase in levels of sodium Congestion in veins in lower legs Fluid leakage from capillaries become easier Enlarged uterus puts pressure on veins when the woman is sitting and lying down leading to blood increase in leg veins Varicose veins becoming swollen and twisting	Review the anatomic and physiologic basis with women and partner and advise on: - • When lying down, lie on your left side with legs slightly elevated • When sitting, slightly elevate your feet/legs Avoid: - -Crossing the legs when sitting -Tight or restrictive bands around legs and -Sitting or standing for long periods -Increase intake of fluids • Return for care if signs and symptoms worsen	Headache Blurred vision Nausea or vomiting Epigastrize pains May indicate severe pre-eclampsia Fatigue or sleeplessness Dizziness or fainting Pall or Breathlessness and Rapid heart beat May indicate severe anaemia Localized pain over a vein, swelling of the affected limb may indicate superficial thrombosis Calf muscle tenderness swelling of the affected limb may indicate deep vein thrombosis
Constipation Bowel functions changes – constipation commonly occurs during the 2nd – 3rd trimester		Review anatomic/physiologic basis with woman and advice her partner as follows: - Ensure good diet -Increase intake of fresh fruits and vegetables -Increase intake of fluids -Drink hot or cold fluids on empty stomach preferably in the mornings	Rapidly progressing difficulty in defecation A feeling of gas in abdomen Vomiting Rising pulse rate Worsening general condition May indicate bowel obstruction

COMMON DISCOMFORTS DURING PREGNANCY

Signs And Symptoms	Anatomic/Physiologic Basis	Prevention And Relief Measures Provide Reassurance	Alert Signs That May Indicate A Problem. Client To Report For Care.
	Enlarged uterus puts pressure on the lower bowel slowing movement through intestines	• Empty bowels when the urge is felt • Avoid laxative, enemas If signs and symptoms worsen report for care	
Increased urination Increase in frequency especially at night Leaking of urine when sneezing, coughing or laughing Most commonly occurs during the 1st and 3rd trimester	Enlarged uterus puts pressure on the bladder During the day the lower legs and feet become swollen. When the woman rests with her feet up, the fluid is reabsorbed and excreted by the kidneys, as a result of increased volume of fluid in the body. Increased blood flow to kidneys. Increased excretion of sodium and water.	⇒ Review column 2 with women and advise her and partner to follow:- • Void when the urge is felt • Lean forward when voiding to help empty the bladder completely • Do not restrict fluid intake but limit intake of fluid containing natural diuretics e.g. coffee, tea • Do not decrease fluid intake in the evening to decrease voiding during the night If signs and symptoms worsen return for care	
Nausea or vomiting Most commonly occurs during the 1st trimester	Hormonal change causes Smooth muscles relaxation and Changes in carbohydrate metabolism	⇒ Review column 2 with woman and advise her and partner to follow:- Adjust diet as necessary -Eat biscuits, crackers, dry bread or other grain food -Eat smaller, more frequent meals Avoid over eating and eating of fatty, fried and spicy foods -Drink fluids between meals rather than with meals -Drink ginger tea to reduce nausea • Sit upright after meals	1. Epigastric pain, headache, blurred vision may indicate severe pre-eclampsia 2. Loss of appetite-intolerance to fatty food – may indicate gall bladder disease 3. Excessive vomiting with dehydration and ketosis may indicate hyperemisis 4. Fever or chill which may indicate malaria or urinary tract infection

COMMON DISCOMFORTS DURING PREGNANCY

Signs And Symptoms	Anatomic/Physiologic Basis	Prevention And Relief Measures Provide Reassurance	Alert Signs That May Indicate A Problem. Client To Report For Care
		• Get plenty of fresh air, take short walks, sleep with windows open • Avoid -Lying down immediately after eating -Odours or other factors likely to induce vomiting -Brushing the teeth or cleaning the tongue right after meals If signs and symptoms worsen, return for care.	
Vaginal Discharge Most commonly occurs during the 1st -3rd trimester	Increased vascularity of genital, increased mucus production	⇒ Review column 2 with woman and advise her and partner as follows: - • Ensure good hygiene Keep the vulva area as clean and dry as possible Change wet pants often • Avoid Wearing of nylon pants Douching of any kind If signs and symptoms worsen, return for care	1. Profuse, watery, frothy, foul smelling or yellow or greenish discharge. Sores, ulcers or warts on genitals 2. Intense itching of vulva or any of these symptoms in the womans's partner(s) which may indicate sexually transmitted infection (STI)
Fatigue or sleeplessness Most commonly occurs during the 1st trimester	Decreased metabolism in early pregnancy Increase in blood volume and flow, which causes heart to work harder Emotional stress	⇒Review column 2 with woman and advise her and partner as follows: • Ensure a good diet. -Eat a balanced diet -Take micronutrients supplement as directed • Get daily exercise • Massage the back and or abdomen • Avoid -Over exertion and -Smoking and alcohol -The woman's partner should be supportive If signs and symptoms worsen report for care	Dizziness or fainting pallor, breathlessness, rapid heartbeat, swelling of limbs, headache may indicate severeanaemia.

COMMON DISCOMFORTS DURING PREGNANCY

Signs And Symptoms	Anatomic/Physiologic Basis	Prevention And Relief Measures Provide Reassurance	Alert Signs That May Indicat Problem. Client To Report For Care
Haemorrhoids Swollen veins in and around the rectum, associated with pain, itching and bleeding Most commonly occurs during 2^{nd} – 3^{rd} trimester	Hormonal changes cause enlargement and congestion of rectal veins Enlarged uterus puts pressure on rectal veins Constipation causes added pressure on rectal veins	⇒ Review column 2 with the woman and advise her and partner as follows: • Ensure good diet: -Eat a balanced diet -Take adequate fluids -Increase intake of high fibre foods like fresh fruits and vegetables • Have warm sits baths If haemorrhoid is protruding apply ice packs to the area and gently reinsert haemorrhoids into the rectum • Apply anaesthetic ointment if necessary. • Avoid: Constipation or diarrhoea Straining during bowel movements Sitting for long periods especially on hard surface If signs and symptoms worsen return for care	Constipation with anal pain, bleeding on defecation may indicate an anal fissure.

II. LABOUR AND DELIVERY

A. OBJECTIVES

The goal of care during labour and delivery is to ensure the most positive outcome, namely a healthy mother and healthy baby.

The specific objectives are:

- Proper management of the four stages of labour, and
- Early identification and proper management (treatment and/or referral) of complications.

Definition of Labour

Labour begins when there are regular, painful contractions lasting at least 20 seconds (timed by a trained observer), occurring at a frequency of at least two contractions in every 10 minutes and with a cervical dilatation of at least 3cm.

There are four stages of labour.

- First stage
- Second stage
- Third stage and
- Fourth stage

First stage of Labour

The first stage is from the onset of labour to full dilatation of the cervix. This stage normally lasts up to 12 hours.

The first stage consists of latent and active phases.

The latent phase: In the latent phase contractions occur less than 3 in 10 minutes and last less than 20 seconds.

The cervix undergoes full effacement and dilates up to 4cm.

The active phase: The Active Phase lasts six hours with contractions occurring 3-4 times in ten minutes, each lasting 40-60 seconds. The cervix dilates from 4 to 10cm at an average rate of 1cm/hr.

Throughout labour the service provider must be empathetic and show kindness to the woman.

B. MANAGEMENT OF THE FIRST STAGE OF LABOUR

The following routine care should be given during the first stage:

a. Take history:
   i. Onset and symptoms of labour
   ii. Danger symptoms- bleeding, foetal movement, fever, offensive liquor
   iii. Review maternal health record book if available
   If not, ask about past obstetric, medical/surgical history

b. Perform physical examination/assessment (observe stringent aseptic procedures):

i. Thorough general physical examination
   ii. Abdominal examination
   iii. Vaginal examination
   - Check for :
   - Show
   - leakage of liquor (ruptured membranes)
   - Cervical dilatation
   - Presentation

c. Look for any abnormalities such as offensive/meconium-stained liquor
d. Record findings
e. Monitor Labour
   In the Latent Phase, Monitor:
   - Contractions – ½ hourly
   - Descent – 4 hourly
   - Foetal Heart – ½ hourly
   - Cervical Dilatation - 4 hourly

f. Record all findings on observation chart
   i. Use Partograph for clients in active phase (page 57) if there are no contra-indications.
   ii. Monitor progress as plotted on partograph
   iii. Identify any problems and take appropriate action

Perform vaginal examinations every four hours unless otherwise indicated. If dilatation on admission is 4cm or above, 2-3 hourly vaginal examinations may be necessary. Avoid too frequent vaginal examinations to prevent infection.

g. Explain to mother and/or accompanying person(s)
   - Progress of labour
   - Reasons for:
     - Any intervention
     - Referral

h. Give emotional support and re-assurance.

C. USING THE PARTOGRAPH

The WHO partograph has been modified to make it simpler and easier to use. The latent phase has been removed and plotting on the partograph begins in the active phase when the cervix is 4 cm dilated. A sample partograph is included (Table 1). Note that the partograph should be enlarged to full size before use. Record the following on the partograph:

PATIENT INFORMATION: Fill out name, gravida, para, hospital number, date and time of admission and time of ruptured membranes.

FETAL HEART RATE: Record every half hour.

AMNIOTIC FLUID: Record the colour of amniotic fluid at every vaginal examination:

- I: membranes intact;
- C: membranes ruptured, clear fluid;
- M: meconium-stained fluid;
- B: blood-stained fluid.
- A: absence of fluid

MOULDING:

- 2: bones touch each other 0
- 3: bones overlapped but reducible ++
- 4: bones are overlapped and cannot be separated +++

CERVICAL DILATATION: Assessed at every vaginal examination and mark with a cross (X). Begin plotting on the partograph at 4 cm.

ALERT LINE: A line starts at 4 cm of cervical dilatation to the point of expected full dilatation at the rate of 1 cm per hour.

ACTION LINE: Parallel and 4 hours to the right of the alert line.

DESCENT ASSESSED BY ABDOMINAL PALPATION: Refers to the part of the head (divided into 5 parts) palpable above the symphysis pubis; recorded as a circle (O) at every vaginal examination. At 0/5, the sinciput (S) is at the level of the symphysis pubis.

HOURS: Refers to the time elasped since onset of active phase of labour (observed or extrapolated).

TIME: Record actual time.

CONTRACTIONS: Chart every half hour; palpate the number of contractions in 10 minutes and the duration of each contraction in seconds.

- Less than 20 seconds: 
- Between 20 and 40 seconds: 
- More than 40 seconds: 

OXYTOCIN: Record the amount of oxytocin per volume IV fluids per minute every 30 minutes when used.

DRUGS GIVEN: Record any additional drugs given.

PULSE: Records every 30 minutes and mark (•).

BLOOD PRESSURE: Record every 4 hours and mark with arrows.

TEMPERATURE: Records every 4 hours.

UNINARY OUTPUT: Measure and record volume and test for protein and acetone every 2 hours

Name Gravida Para Hospital number

Date of admission Time of admission Ruptured membranes Hours

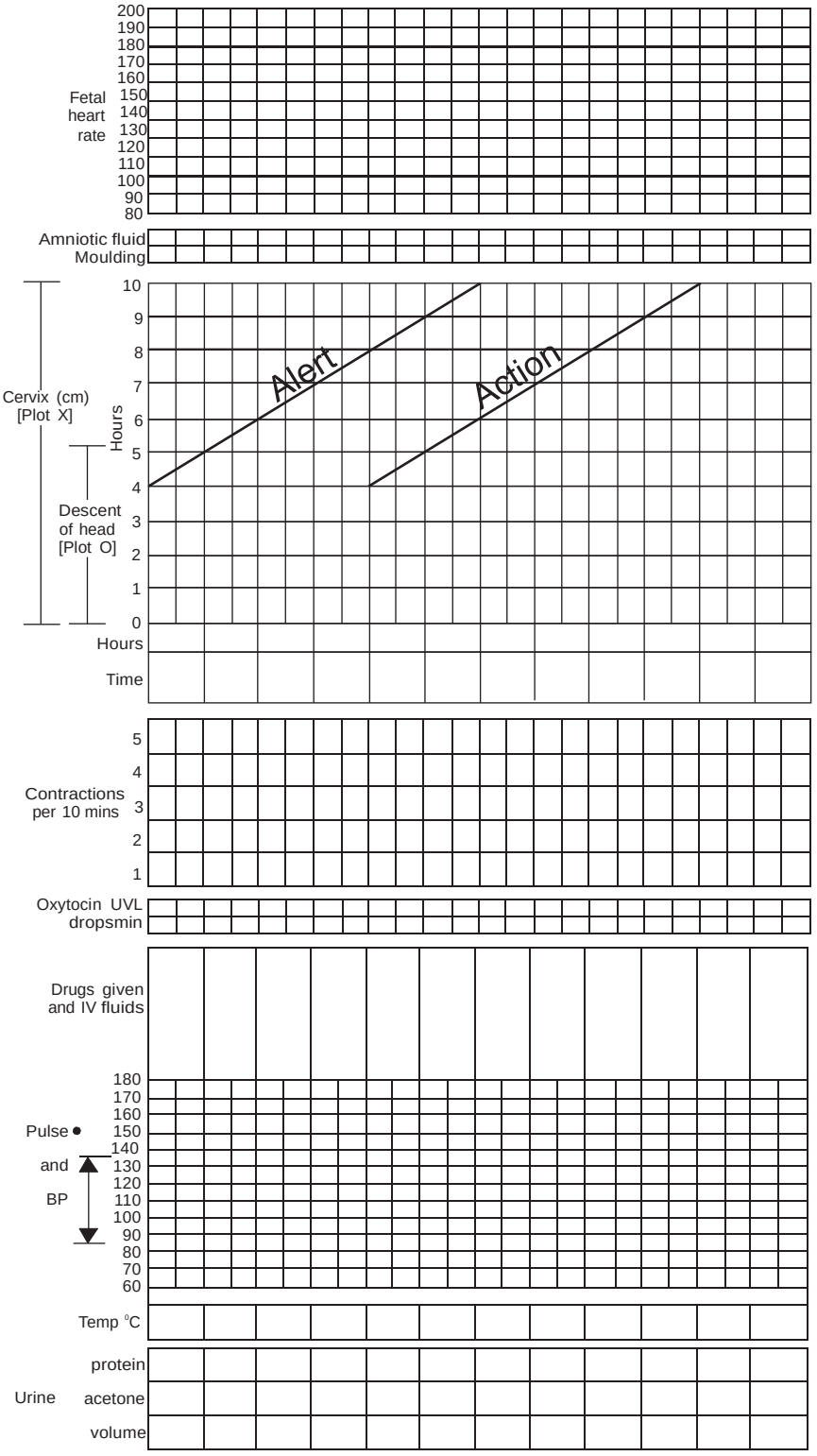


Table 1

DESCENT

Abdominal palpation

- By abdominal palpation, assess descent in terms of fifths of fetal head palpable above the symphysis pubis (Fig - A–D):
  - A head that is entirely above the symphysis pubis is five-fifths (5/5) palpable
  - A head that is entirely below the symphysis pubis is zero-fifths (0/5) palpable.

Abdominal palpation for descent of the fetal head

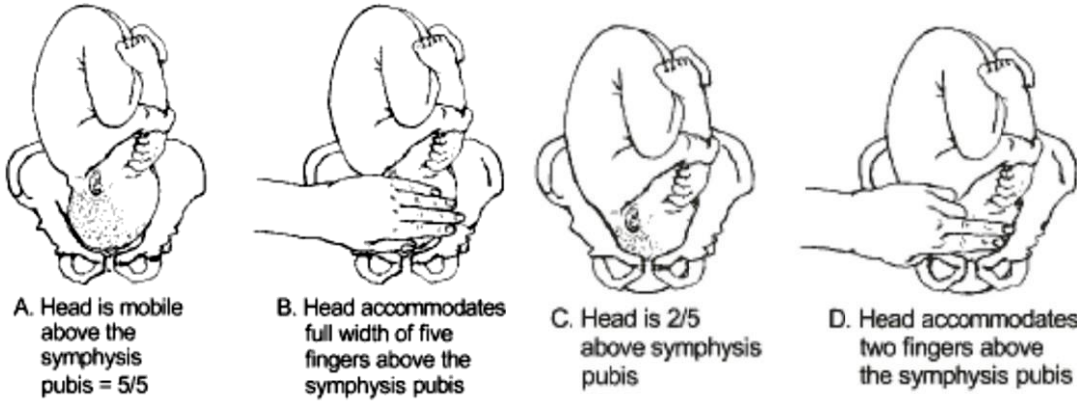


Fig. 6

LABOUR PROGRESS	FOETUS CONDITION	MOTHER CONDITION
Uterine contractions (Frequency & duration in 10 mins	FETAL HEART RATE	GENERAL CONDITION
CERVICAL DILATATION	MOULDING	TEMP. PULSE & BP
DESCENT OF HEAD IN FIFTHS	CAPUT FORMATION	FLUID INTAKE/OUTPUT
	MEMBRANES	URINE-AMOUNT, PROTEIN & ACETONE
	COLOUR OF LIQUOR	MEDICATIONS GIVEN IV FLUIDS

NOTE: Do not use partograph if:

- Dilatation is 8 – 10cm
- Initial assessment indicates immediate referral
- Immediate emergency caesarean section is indicated after initial

KEY:
⟹STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

D. MANAGEMENT OF PROLONGED FIRST STAGE OF LABOUR

The latent and active phases of the first stage may be prolonged. Use the table below for management at the various levels of healthcare

PROBLEM	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
1. Prolonged Latent phase (more than 8 hours)	If woman has been in labour for more than 12 hours: ⟹Encourage her to drink fluids and ⟹REFER	⟹ Give IV fluids 500mls Normal Saline (N.S) or Ringers Lactate (R/L) ⟶ Give antibiotics if membranes have been ruptured for 12 hours or more: • i.v. ampicillin 2.0hm stat. OR • Caps. Amoxillin 1.0gm stat. ⟹ REFER	⟹ Examine the woman. • If the woman has been in the latent phase for more than 8 hour and there is little or no sign of progress, review the diagnosis. The woman may not be in labour. • If there has been progress in cervical dilatation, induce labour: ⟹ Perform artificial rupture of membranes (ARM) ⟹ Infuse oxytocin 2.5 units in 500mls of D/S or N/S at 10 drops per minute and increase the infusion rate by 10 drops per minute every 30 minutes until contractions are established. ⟹ Monitor with partograph. ⟹ Assess every 4 hours. ⟹ Reassess descent, cervical dilatation and foetal heart. ⟹ Perform c-section if the woman has not entered the active phase after 8 hours of oxytocin infusion or foetal distress develops. ⟹ Refer if no facility for c-section is available

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

PROBLEM	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
2. Prolonged Active phase (more than 6 hours)	Take history. If woman has been in labour for more than 12 hours: ⇒Encourage her to drink fluids and ⇒REFER	⇒ Take history and examine woman. ⇒ Monitor and record observations on partograph: if dilatation crosses the " Alert" line ⇒ REFER	⇒ Take history and examine woman. ⇒ Monitor and record observations on partograph ⇒ Assess uterine contractions If contractions are occurring less than 3 in 10 minutes and lasting less than 40 seconds, suspect inefficient/hypotonic uterine action If membranes have already ruptured, re-assess pelvic capacity and size of baby to exclude CPD. If no CPD, and there has been progress in cervical dilation, augment labour with oxytocin: * Regimen: • Infuse oxytocin 2.5 units in 500mls of D/S or N/S at 10 drops per minute and increase the infusion rate by 10 drops per minute every 30 minutes until contractions occur 3-4 in 10 minutes lasting 40-60 seconds. • Monitor with partograph • Perform C-Section as indicated by partograph plottings or if foetal distress develops • Refer, if no facility for C-section is available If membranes have not ruptured, rupture membranes if cervical dilatation is between alert and action line and head is 3/5th palpable. If contractions are occurring 3 in 10 minutes each and last more than 40 seconds, descent is poor and dilatation slow suspect CPD, obstruction, malposition or malpresentation. ⇒ Deliver by c-section (foetus alive or dead) (Obstetrician may perform distructive operation if foetus is dead)

Notes on use of oxytocin:

- Oxytocin should not be used in women of parity five or more. In women of parity 1 – 4, oxytocin should be used with caution.
- The midwife should not augment or induce labour on her own.
- Do not augment or induce labour if there are no facilities for emergency surgery.
- Stop augmentation if foetal distress develops.

E. MANAGEMENT OF SECOND STAGE OF LABOUR

The second stage starts from full dilatation of the cervix to the birth of the baby. It usually lasts up to 30 minutes in multiparae, and 60 minutes in nulliparae respectively. The clinical signs/symptoms indicating that the second stage has started include the following:

- Contractions become stronger and are of longer durations, lasting 40-60 seconds and occur at shorter intervals (3 contractions in 10 minutes)
- The woman feels pressure in the rectum accompanied by the urge to defecate
- The perineum bulges and the anus dilates
- Nausea and retching may occur as the cervix reaches full dilatation

These signs/symptoms may not always be present. To confirm that the second stage has begun, perform a vaginal examination to assess the condition of the cervix and the descent to the presenting part.

Delivery (Steps)

- Explain to patient what to expect during delivery
- Position patient according to her preference
- Wear protective clothing (plastic apron, boots, goggles and mask)
- Wash hands with soap and water and dry with sterile towel
- Put on sterile gloves on both hands
- Clean vulva/perineum with antiseptic solution e.g Chlorhexidine/Savlon
- Drape the woman appropriately for delivery
- Check delivery trolley and instruments
- Infiltrate the perineum with anaesthetics, if indicated
- Encourage woman to bear down when in expulsive stage and to rest in between contractions
- Perform an episiotomy when the head crowns, if indicated
- Maintain flexion of the head as it comes out of the vagina
- Observe perineum for impending tear
- Prepare and perform episiotomy when indicated
- Prevent soiling of the perineum using a sanitary pad to cover the anus
- When the head crowns, ask the woman to pant or give small pushes with contractions

- Await spontaneous delivery of the head with subsequent contractions
- Wipe baby's face, eyes, mouth and nose gently with gauze
- Feel gently around the baby's neck for the cord
  - If the cord is present and loose, slip it gently over the head
  - If the cord is tight around the neck, clamp at 2 points and cut in between clamps, then unwind the cord
- Clear the airway if meconium is present (nostrils, nasopharynx, mouth, hypopharynx) to prevent meconium aspiration
- Support the head and allow restitution (external rotation through 45°)
- Deliver anterior shoulder by applying gentle downward pressure on the head during subsequent contractions
- Lift baby up towards mothers' abdomen and deliver the posterior shoulder
- Place the baby on mothers' lower abdomen
- Note time of delivery
- Thoroughly dry the baby immediately and wrap with a dry cloth
- Wipe the baby's eyes
- Assess the baby's condition using APGAR SCORE (SeeTable 2)
- Begin resuscitation if baby is not breathing
- Palpate the mothers' abdomen to exclude second baby
- Give 10 IU oxytocin intramuscularly to mother within one (1) minute after delivering of the baby; if not available or if for any reason can not be given, give Misoprostol 600 mcg (3 tablets orally).
- Clamp and cut the cord
  - Clamp the umbilical cord near the perineum and clamp near the baby's umbilicus (about 5 cm from the abdomen)
  - Cut the cord to separate baby from mother
- Leave the baby on mothers chest in skin to skin contact (bonding)
- Cover the baby's body and head to keep the baby warm
- Encourage immediate initiation of breastfeeding (within 30 minutes)
- Put identification label on the baby

Collect cord blood for grouping, Rhesus factor and antibodies (HIV, HBV), and other tests, where indicated
How to give Episiotomy ⇒ Infiltrate perineal tissues with 10mls of 1% lignocaine or xylocaine without adrenaline ⇒ Wait and perform episiotomy when: – The perineum is thinned out – 3-4cm of baby's head is visible during a contraction

Indications for Episiotomy

⇒ Premature/Preterm delivery
⇒ Breech delivery
⇒ Shoulder dystocia
⇒ Instrumental delivery
⇒ Rigid perineum

APGAR Score

	2 points	1 point	0 point
Appearance (colour)	pink body, face and extremities (hands and feet)	Pink body, blue extremities	Pale or blue body
Pulse (heart rate)	More than 100 beats per minute,	100 beats per minute or less,	No heart beat
Grimace (reflex to stimulation)	Crying, coughing or sneezing	Grimace or puckering of face	No response
Activity (muscle tone)	Active movement; waving arms and legs; flexion	Some movement; some flexion	Limp arms and legs, no flexion, no movement
Respiration (breathing)	Strong cry or regular breathing	Slow, irregular breathing; retracting of chest wall, grunting or weak cry	No breathing, no cry

Table 2

- ~~S~~Start resuscitation, if APGAR SCORE is 3 or below at 1 minute after birth or 6 or below at 5 minutes
- ~~In~~Inform paediatrician, if available or
- ~~R~~REFER

KEY:
⇒ STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

F. MANAGEMENT OF SECOND STAGE OF LABOUR AT SELECTED LEVELS OF THE HEALTH SYSTEM

COMPLICATIONS	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
1. Prolonged second stage (more than one hour)	If the woman has not delivered after 10 hours of labour OR If the woman reported in the second stage which from the history, has lasted more than one hour: ⇒ REFER	⇒ Take history and assess patient: - Size, presentation and level of descent of foetus, moulding, caput, foetal heart rate - Contractions (strength and frequency) - Vital signs and general condition of mother If there is no disproportion and presentation is favourable: ⇒ Ensure hydration and empty bladder ⇒ Rupture membranes (if still intact) ⇒ Urge patient to bear down with each contraction ⇒ Check descent: if 0/5 or 1/5 (see page 59) with very slight or no moulding or caput: ⇒ Perform episiotomy ⇒ Perform vacuum extraction, if trained ⇒ Give antibiotics (amoxycillin 1.0g stat OR iv. ampicillin 2.0g stat) and If not trained in vacuum extraction, ⇒ REFER IMMEDIATELY Note: See specific causes of prolonged second stage and their management below:	⇒ Follow same steps as in sub-district ⇒ Manage specific cause (see below)
2. Mal-presentation/ mal-position	If the baby's arm, foot, buttocks, umbilical cord, face, brow and shoulder can be seen or felt, then ⇒ REFER	⇒ Do vaginal examination; if presentation is breech: - Perform episiotomy when perineum is distended and deliver the baby and.... ⇒ REFER If other mal-presentation/mal-position (shoulder, brow, face, occipitoposterior, etc.) is present REFER	⇒ Follow same steps as in sub-district ⇒ Manage and/or refer specific cause (shoulder, brow, face, occipito-posterior, etc.)

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATIONS	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
3. Cephalopelvic disproportion	If woman's abdomen or baby appears too big ⇒ REFER	⇒ Take blood for grouping and cross-matching (analysis to be done at district hospital) ⇒ Give i.v fluids 500 mls N/S ⇒ Insert Foley's catheter ⇒ Give antibiotics (amoxycillin 1.0g stat OR iv. ampicillin 2.0g stat) and ⇒ REFER	⇒ Follow same steps as in sub-district ⇒ Take blood for Hb, FBC, Sickling, grouping and cross-matching If baby alive, perform c-section If baby is dead, ⇒ Perform destructive operation if trained Otherwise perform C-section If bladder is oedematous or urine is bloody wine retain catheter for 5-7 days
4. Twins or multiple pregnancy	If the abdomen or uterus is unusually large and foetal parts are difficult to feel ⇒ REFER	⇒ Do vaginal examination to identify presenting part If cervix is fully dilated, deliver normally; NB do not use oxytocin after delivery of first twin If presentation is favourable: ⇒ Rupture membranes if indicated ⇒ Monitor woman and foetus If no delivery within 30 minutes ⇒ REFER	⇒ Follow same steps as in sub-district ⇒ Monitor woman and foetus If woman has been in labour at district hospitals and no delivery within one hour ⇒ Perform C-section If woman has been referred from lower level ⇒ Follow same steps as for sub-district ⇒ Take blood for Hb, FBC, sickling, grouping and cross-matching ⇒ Perform c-section
5. Foetal Distress Signs include: Foetal heart rate <120 bpm or Foetal heart rate irregular Foetal heart rate > 160 bpm Excessive foetal	⇒ Place woman on left side(left lateral position) and ⇒ REFER immediately	⇒ Do vaginal examination to determine progress of labour If cervix is fully dilated, descent is 0/5 or 1/5 and no cephalopelvic disproportion: Perform episiotomy ⇒ Deliver by vacuum extraction if trained If delivery does not occur within 30 mins: ⇒ Turn mother on left side and give oxygen ⇒ Start IV infusion (normal saline or Ringers	⇒ Follow same steps as in sub-district If baby is alive: ⇒ Deliver by vacuum extraction OR ⇒ C-section If baby is dead; (and there is no CPD/Obstruction) ⇒ Allow spontaneous vaginal delivery .

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATIONS	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
movement [NB: these signs can indicate foetal distress with or without meconium-stained liquor].		lactate) If there is maternal fever with foetal tachycardia ⇒ Start (amoxycillin 1.0g stat OR iv. ampicillin 2.0g stat) AND ⇒ Start anti-malaria treatment (100 mg artesunate and 300 mg amodiaquine stat). Record medications on referral form and ⇒ REFER NOTE: if signs of obstruction are present see page 78) ⇒ REFER IMMEDIATELY	⇒ Perform C/section ⇒ Obstetrician may perform destructive operation

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATIONS	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
6. Cord Prolapse	If umbilical cord can be seen or felt in vagina: ⇒ Ask woman to stop pushing ⇒ Replace cord into vagina ⇒ Place piece of clean cloth on vulva ⇒ Position mother on her left side and raise hips by putting pillows underneath and ⟶ REFER	⇒ Follow same steps as in community ⇒ Check foetal heart ⇒ Check to see cord is pulsating. If yes • Prevent cord from coming out of vagina • Place pad on vulva • Prevent compressing of cord by presenting part • Instil 300 ml of N/S in bladder through indwelling catheter • Place mother in left lateral position and elevate hips • Administer high concentration of oxygen, available (6 – 7 litres/min. by mask) If cervix is fully dilated, presentation is cephalic and descent O/5 and baby is alive. ⇒ Assist delivery immediately by vacuum extraction, if trained If cervixn is not fully dilated and foetal heart rate is present or there is malpresentation/malposition ⇒ REFER If cord not pulsating, check for signs of obstruction as on page 78 If obstruction ⇒ Give antibiotics (amoxycillin 1.0g stat OR i.v. ampicillin 2.0g stat) and ⇒ REFER ⇒ If no sign of obstruction and presentation is favourable o Allow normal delivery if baby is dead.	⇒ Follow same steps as in sub-district ⇒ Take blood for Hb, FBC, sickling grouping and cross-matching If baby is alive ⇒ Deliver by vacuum extraction If indicated, perform c-section

G. MANAGEMENT OF THE THIRD STAGE OF LABOUR – DELIVERY OF PLACENTA

The third stage starts after delivery of the baby and ends with delivery of the placenta.

After delivery of the baby:

Conduct Active Management of Third Stage of Labour (AMTSL see page 70)

- Give Oxytocin 10 units IM within one minute of delivery of the baby after exclusion of another baby by abdominal palpation
- Deliver placenta by controlled cord traction
  - Ensure bladder is empty. If full catheterize
  - Check for uterine contraction by placing the left hand on the fundus
  - Place left hand on the lower abdomen in the suprapubic area and steady uterus when a contraction occurs
  - At the same time hold the clamp with the right hand, and apply gentle downward and outward traction
  - Maintain counter pressure with the left hand in the suprapubic area whilst applying traction to cord until placenta is visible at the vulva
  - Release left hand to receive placenta at introitus with both hands and place it in a receiver (bowl or dish)
- Massage uterus to maintain contractions. Repeat every 15 minutes for 2 hours (making sure uterus is firm as you check for blood loss)
- Examine the placenta and membranes for:
  - Completeness of lobes and membranes. (Look for signs of any extra lobes)
  - Presence of cord vessel abnormality
  - Retroplacental clots
  - Any other abnormality
- Examine perineum and vagina for bleeding, laceration/tear
- Repair episiotomy or any 1st or 2nd degree tear
- Estimate volume of blood loss
- Decontaminate all items used for the delivery

Ask for assistance or supervision for repair of 3rd or 4th degree perineal tear and suture of cervical tear or REFER

After repair of episiotomy or 3rd or 4th degree perineal tears:

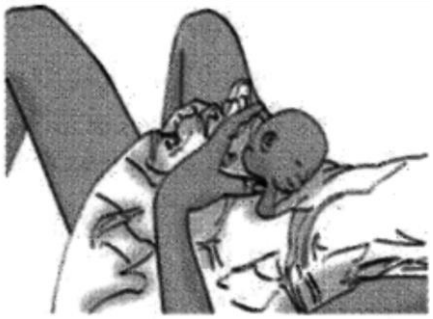
- Perform vaginal examination to check adequacy of introitus, and
- Remove all gauze/swabs

Perform a rectal examination to identify:

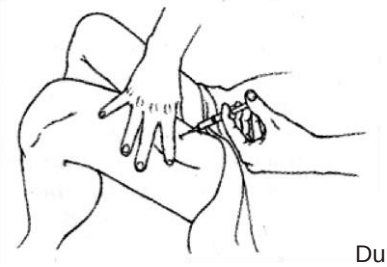
- Occult 3rd and 4th degree perineal tears,
- Integrity of sphincter ani
- Presence of suture in the rectum

ACTIVE MANAGEMENT OF THE THIRD STAGE OF LABOR (AMTSL)

1: Place the baby in skin-to-skin contact on the abdomen of the mother, dry the baby, assess the baby's breathing and perform resuscitation if needed. Cover the woman and baby.



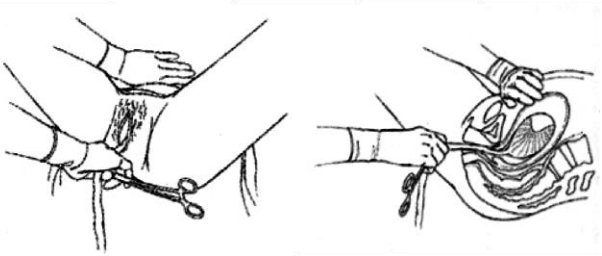
2: Administer a uterotonic (the uterotonic of choice is oxytocin 10 IU. Intramuscularly) immediately after birth of the baby, and after ruling out the presence of another baby.



3: Clamp and cut the cord after cord pulsations have ceased or approximately 2-3 minutes after birth of the baby, whichever comes first. Cover the cord with a piece of gauze when cutting the cord to avoid splashing of blood.

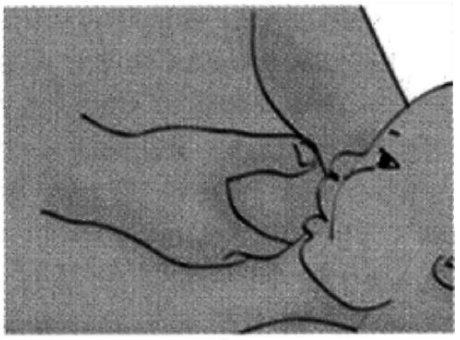
4: Place the infant directly on the mother's chest, prone, with the new-born's skin touching the mother's skin. Cover the baby's head with a cap or cloth. Cover the woman and baby.

5: Perform controlled cord traction while, at the same time, supporting the uterus by applying external pressure on the uterus in an upward direction towards the woman's head,



6: Massage the uterus immediately after delivery of the placenta and membranes until it is firm.

During recovery, assist the woman to breastfeed if this is her choice, monitor the newborn and woman closely, palpate the uterus through the abdomen every 15 minutes for two hours to make sure it is firm and monitor the amount of vaginal bleeding. Provide PMTCT care as needed



POPPHI
Prevention of Postpartum Hemorrhage Initiative

Table 7

Clean perineum and apply sterile gauze to vulva
Wash hands with soap and water and dry with clean towel
Prescribe/give analgesics (paracetamol or diclofenac sodium) as needed.
Explain to mother:

- The extent of laceration if any
- Length of time before suture dissolves,
- Care of perineum, and
- Any other special care

Compliment mother for her efforts

Repair of Episiotomy

- Wear sterile gloves on both hands
- Infiltrate the perineal tissues with local anaesthetic (1.0% lignocaine or xylocaine without adrenaline), if not already done.
- Start the repair about 1.0 cm above the apex/top of the episiotomy incision with 00 chronic catgut.
- Make a strong knot.
  Close the vaginal mucosa using continuous stitches.
- Continue to suture to the level of the vaginal opening or hymenal ring.
- Put the needle through the vaginal mucosa behind the hymenal ring.
- Bring the needle out to the perineal laceration.
- Suture the perineal muscles using continuous stitches to the bottom of the wound.
- Close the subcuticular tissue and skin by picking the tissues right and left continuously and end up the vaginal orifice.
- Insert the needle under the hymenal ring to the inside of the vagina and make a knot.

H. MANAGEMENT OF THE FOURTH STAGE OF LABOUR
The fourth stage is the first six hours following the birth of the placenta.

First Hour

- Put the baby to mother's breast within half hour of delivery
- Do the following:
  - Monitor mothers BP and pulse every 15 minutes
  - Palpate and massage the uterus every 15 minutes for one hour to ensure it remains firmly contracted
  - Inspect the introitus every 15 minutes for any active bleeding
- Examine the baby:
  - Breathing
  - Colour
  - Muscle tone
  - Palate (for cleft palate)
  - Anus (for imperforate anus)
- Continue to keep baby warm, especially the head

2-6 Hours

Do the following:

- Take blood pressure and pulse every 2 hours
- Take temperature at least once
- Encourage the woman to pass urine frequently
- Palpate the uterus, palpate bladder and check vagina for bleeding every hour
- Support mother to continue breastfeeding. If mother is HIV positive and chooses not to breastfeed support mother's choice
- Administer 1.0 mg Vitamin K to baby to prevent haemorrhagic disease: For babies weighing less than 2.5kg give 0.5mg
- Instil antibiotic drops – Chloramphenical or Tetracycline 0.5% into the baby's eyes
- Carry out a detail examination of baby from head to toe to exclude abnormalities.
- Dry/wipe the baby (do not bath the baby within the first 24 hours)
- Offer supportive care
  - Talk to mother and encourage her to ask question or express her feeling
  - Advise birth companion to remain with the woman during the period
  - Ensure mother and baby are kept together all the time to promote bonding
  - Ensure woman has a clean bed
  - Replace soiled and wet clothing and bedding
  - Encourage mother to pass urine when she feels the urge or if bladder is palpable
  - Encourage adequate fluid intake and appropriate food and sufficient rest
  - Maintain a calm environment conducive to mother
  - Provide continuous support to parents/relatives about well being of mother and baby

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

I. MANAGEMENT OF THIRD AND FOURTH STAGES OF LABOUR AT SELECTED LEVELS OF THE HEALTH SYSTEM

COMPLICATION	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
1. Post -partum Haemorrhage (PPH) bleeding of 500mIs or more from the vagina before, during or after delivery of placenta, or any blood loss that causes maternal condition to deteriorate.	If placenta is delivered: ⇒ Massage/rub uterus continuously to expel blood and blood clots ⇒ Give fluids orally or start i.v fluids (if possible) ⇒ Insert Misoprostol 1000mcg (5tabs) rectally ⇒ Organise blood donors to accompany mother ⇒ Arrange transport ⇒ REFER IMMEDIATELY	⇒ Give/continue i.v fluids 500 mls normal saline (N/S) or ringers lactate (R/L) six hourly] ⇒ Monitor for signs of SHOCK ⇒ Resuscitate if necessary (see flow chart for SHOCK page 119) ⇒ Take blood for Hb, grouping and cross -matching ⇒ Give i.v 10 IU oxytocin stat ⇒ Give ergometrine 0.2mg i.m or i.v slowly, if BP is normal ⇒ Insert Foleys catheter for continuous bladder drainage If bleeding continues, examine for lacerations of perineum, vagina or cervix; if laceration present: ⇒ Suture If placenta is delivered: ⇒ Massage uterine fundus and stimulate nipples ⇒ Do bimanual compression of the uterus if necessary ⇒ Examine placenta for completeness and extra lobe If bleeding continues REFER If bleeding ceases or stops: ⇒ Give broad spectrum antibiotics for 5 days ⇒ Observe for 24 hours ⇒ Check Hb ⇒ Give haematinics ⇒ REFER If bleeding with placenta still in utero, see page 75 For management of retained plancenta	⇒ Follow the steps as for sub-district level ⇒ Give blood transfusion, if necessary ⇒ Identify the cause of haemorrhage • Atonic uterus • Retained placenta, retained fragments or pieces of placenta • Occult rupture of uterus or incomplete rupture of uterus, ruptured uterus • Inversion of uterus • Lacerations or tears of vulva, vagina ⇒ Manage appropriately as described under the respective sections

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATION	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
2. Atonic Uterus (The uterus that fails to contract after delivery of the placenta) – There is excessive bleeding and – Uterus remains soft and distended, and – Lacks tone)	⇒ Massage/rub uterus continuously to expel blood and blood clots ⇒ Give fluids orally or start i.v fluids 500mls N/S or R/L (if possible) ⇒ Organise blood donors to accompany mother ⇒ Arrange transport ⇒ REFER IMMEDIATELY	⇒ Massage/rub uterus ⇒ Empty bladder if full – Insert Foley's catheter for continuous bladder drainage ⇒ Resuscitate (if necessary) and monitor for signs of shock (see flow chart for shock) ⇒ Give 20 IU oxytocin in 500mls of N/Saline or Ringers Lactate to run at 40 dpm NOTE: Do not give more than 3.0 litres of oxytocin infusion If blood pressure is not raised, give 0.2 mg ergometrine iv slowly. Repeat i.m after 15 minutes ⇒ Give broad spectrum antibiotics ⇒ Take blood for grouping and cross-matching If bleeding continues, - Give/insert misoprostol 1000mcg rectally, if not already given at the community level ⇒ - Do bimanual compression and REFER If bleeding ceases or stops ⇒ Check Hb ⇒ Observe for 24 hours REFER	⇒ Follow same steps as for sub-district ⇒ Give blood transfusion if necessary ⇒ Examine to identify other causes of bleeding and manage appropriately If bleeding continues in spite of the above measures ⇒ Perform bimanual compression of the uterus ⇒ Insert hydrostatic condom tamponade ⇒ Assess clotting status (use bedside clotting test) If blood does not clot after 7 minutes or a soft clot forms that breaks down easily, suspect coagulopathy ⇒ REFER

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATION	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
3. Retained Placenta: Placenta is not delivered within 30 minutes of delivery of baby:	⇒ REFER	If trained to do manual removal: ⇒ Give broad spectrum antibiotics (amoxycillin 1.0g stat OR i.v. ampicillin 2.0g stat) ⇒ Remove placenta manually under analgesia. • Give pethidine 100mg and diazepam 10mg slowly iv (Do not mix in the same syringe) • Give 20 units oxytocin in 500mls N/Saline to run at a rate of 40-60 dpm to keep the uterus contracted • Massage the uterus • Give ergometrine injection 0.2mg im OR Misoprostol 800 to 1000 mcg rectally If bleeding still continues ⇒ Examine the placenta and membranes for completeness and extra lobe ⇒ Continue with amoxicillin 500mg tid x 5 days and metronidazole 400mg tid x 5 days If not trained to do manual removal: ⇒ Give broad spectrum antibiotics (amoxycillin 1.0g stat OR i.v. ampicillin 2.0g stat) ⇒ REFER NOTE: If placenta is retained and there is no bleeding ⇒ REFER	⇒ Follow same steps as for sub-district ⇒ Manage appropriately. ⇒ Ensure that the bladder is empty • Catheterize if necessary If placenta is visible, ask woman to bear down If placenta can be felt in the vagina, remove it If placenta is not delivered, give oxytocin 10 i.u i. v slowly if not already done. If placenta is not delivered after 30 minutes of oxytocin administration and uterus is contracted, do gentle controlled cord traction (avoid forceful traction of the cord). If controlled cord traction fails, do manual removal of placenta NB: watch for very adherent tissues, which may be placenta, accreta. Do not use any instrument for removal. Instruments may cause uterine perforation. ⇒ Continue iv oxytocine infusion as for sub-district If bleeding continues assess clotting status If there are signs of infection (fever, foul smelling vaginal discharge,) give broad-spectrum antibiotics as above.

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATION	COMMUNITY	SUB-DISTRICT	DISTRICT
4. Retain ed fragments of placenta	If placenta is delivered but uterus remains soft and bleeding continues ⇒ Start i.v fluid if possible 500ml N/S or R/L ⇒ Give mistoprostol 800 to 1000mcg rectally ⇒ REFER	⇒ Follow same steps as in community. If trained to do manual removal ⇒ Do manual exploration of the uterus and... • Feel for and remove retained placental fragments (Technique is similar to that described for manual removal of placenta) ⇒ Give 20 IU oxytocin in 500mls N/Saline at a rate of 40 – 60 drops per minute to keep uterus contracted If no oxytocin available or haemorrhage continues ⇒ Give ergometrine 0.2mg im or iv slowly or Misoprostol 800 to 1000mcg rectally,if not already given at community If not trained to do manual exploration of uterine cavity, give broad spectrum antibiotics and ⇒ REFER	⇒ Follow steps as in sub-district ⇒ Do manual exploration of the uterus • Remove placental fragments If bleeding continues do bed side clotting test If coagulopathy: • Transfuse grouped and cross-matched fresh blood, or fresh frozen plasma. ⇒ REFER

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATION	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
5. Inversion of uterus The uterus is said to be inverted if it turns inside out during the delivery of the placenta. This may be complete or partial Complete inversion: The inside of the uterus can be seen outside the vagina. Partial inversion: The fundus of the uterus cannot be felt or the middle of the uterus is deepened in.	⇒ Give oral fluids or i.v fluids 500ml N/S or R/L if possible and ⇒ REFER IMMEDIATELY	⇒ Empty bladder ⇒ Give i.v fluids 500mls N/Saline or R/L ⇒ Resuscitate if necessary ⇒ Monitor for signs of shock (see page 119) ⇒ Take blood for grouping and cross-matching ⇒ Examine the woman to confirm inversion DO NOT GIVE OXYTOCIN If woman is in severe pain; give Pethidine 100mg i.v slowly ⇒ Give broad spectrum antibiotics • IV ampicillin 2.0gm stat • Tabs Metronidazole 400mg • REFER	⇒ Follow steps as in sub-district If there are signs of infection or fever • Give antibiotics: Gentamycin 80mg i.v 12hrly Ampicillin 2.0g i.v. 6hrly Metronidazole 500mg i.m 8hrly then Perform manual replacement /repositioning of the uterus. If successful give i.v oxytocin 10 units stat and continue i.v oxytocin infusion (20 units in 500mls N/Saline or Ringer's lactate) If replacement is not successful ⇒ REFER

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATION	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
6. Obstructed labour Labour comes to standstill due to a mechanical causes. This is usually preceded by prolonged labour (15-18hrs). The woman looks: Exhausted, Restless dehydrated (sunken eyes, dry lips, etc), anxious. Pulse is raised, there may be fever, urine is concentrated, cervix is oedematous, greenish or foul smelling liquor. The foetal head has large caput, (excessive moulding)	⇒ Give oral fluids ⇒ Give iv fluids and antibiotics if possible - IV ampicillin 2g stat - M gentamycin 80mg stat - IV Metronidazole 500mg stat ⇒ REFER	⇒ Take history ⇒ Continue or start i.v fluids ⇒ Take blood for grouping and cross-matching ⇒Give antibiotics (iv ampecillin2.0g, 6 hourly amoxycillin 1.0g, 6 hourly and metronidazole 500mg iv 8 hourly ⇒ Examine the woman for signs of obstruction. If confirmed, ⇒ REFER immediately	⟶ Follow steps as at sub-district ⟶ Continue i.v fluids and broadspectrum antibiotics ⟶ Reassess woman to confirm obstruction ⟶ Perform C-section (baby alive or dead) (Obstetrician may perform destructive operation if baby is dead)

KEY:
⇒STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/PROBLEMS

COMPLICATION	COMMUNITY TBA/CHO	SUB-DISTRICT HEALTH CENTRE/COMMUNITY MIDWIFE	DISTRICT FIRST REFERRAL OR DISTRICT HOSPITAL
7. Ruptured uterus	If any bleeding from vagina, or if abdomen is hard or painful to touch: ⇒ Start i.v fluid normal saline (N/S) or ringers lactate (R/L) if possible ⇒ Organise blood donors ⇒ REFER immediately (accompany woman)	⟶ Take blood for grouping and cross matching (Analysis will be done at the district level) ⟶ Give iv fluids If in shock, manage as on page 119 ⟶ Insert Foley's catheter ⟹ Organise blood donors Give antibiotics (amoxycillin 1.0g stat OR iv. ampicillin 2.0g stat) and ⟶ REFER	⟹ Follow same steps as for sub-district ⟹ Manage appropriately depending on severity: • Perform hysterectomy or repair of the uterus
8. Hypertensive Disorders during labour	• Manage as specified in section on Antenatal Care.		

J. LEARNING GUIDE FOR MANAGING SELECTED COMPLICATIONS

Occipito-posterior position

1. Great patient and allay anxiety
2. Review case notes and labour records
3. Explain procedure to patient
4. Determine Fetal Position By:

   - Abdominal examination

   - Look for saucer-shaped depression below the umbilicus
   - Determine descent of the fetal head
   - Confirm occiput and sinciput to be at same level (transversely)
   - Palpate limbs on both side of the midline
   - Listen to fetal heart tone far out in the flank

5. Wash hands with soap and water and dry with sterile towel

6. Put on HLD or sterile gloves on both hands

7. Vaginal examination
   - Clean and drape the patient
   - Determine cervical dilatation
   - Feel for the sagittal suture
   - Locate the anterior fontanelle which is diamond shaped
   - Confirm anterior fontanelle to the left for right occipito posterior position (ROP) and vice versa (LOP)
   - Determine adequacy of bony pelvis for vaginal delivery

Management

1. Give adequate analgesia
2. Set up IV drip infusion, if necessary
3. Consider oxytocic augmentation if indicated and there is no contraindication
4. Assess progress of labour by descent of head and cervical dilatation and flexion of head using the partograph
5. Confirm full dilatation of cervix
6. Check if spontaneous rotation of head to OA position has occurred
7. Allow normal vaginal delivery if spontaneous rotation to occipito-anterior position occurs
8. Diagnose persistence of occipito-posterior position when spontaneous rotation does not occur
9. Diagnose deep transverse arrest of the head
10. Reassess level of descent of the head and pelvic capacity

11. Exclude disproportion in midpelvis
12. Refer case to supervisor for delivery of baby by most appropriate method
    - Spontaneous delivery as face-to pubis and with episiotomy
    - Perform vaccum extraction, or
    - Perform forceps rotation and delivery or
      with aseptic technique (using a gloved hand) manually and gently rotate occipat to the anterior position and perform vaccum extraction or forceps delivery
13. If cephaloelvic disproportion is confirmed, perform caesarean section
14. Compete delivery as in Normal delivery learning guide (see page 62)
15. Post delivery tasks
    - Compliment mother for her efforts
    - Dispose of water material according to IP guidelines
      De-contaminate used instruments by soaking in 0.5% chlorine solution
    - Wash hands with soap and water and dry with clean, dry cloth

Face Presentation

1. Greet patient and allay anxiety
2. Review case notes and labour records
3. Evaluate gestational age
4. Explain procedure to the patient
5. Perform abdominal exam
   - Inspect contour of abdomen
   - Palpate the abdomen
   - Feel for round and prominent occiput
   - Feel deep groove between fetal occiput and back
   - Listen to feta heart

1. Greet patient and allay anxiety
2. Review case notes and labour records
3. Wash hands with soap and water. Dry with clean, dry towel
4. Put on HLD or sterile gloves on both hands
5. Perform vaginal exam
   - Clean the perineum with antiseptic solution
   - Perform digital vaginal examination
   - Assess cervical dilatation
   - Feel for orbital ridges, and alveolar margin
   - Determine position of the chin
6. If pelvis is small or mento-posterior position occurs, perform Caesarean Section
7. If mento-anterior position and pelvic is adequate, allow labour to continue
8. Observe for abnormal labour pattern and proceed to Caesarean Section if this occurs

9. Perform normal post-delivery tasks

Brow Presentation

1. Review labour records, including partograph if available
2. Wash hands with soap and water and dry with a sterile towel
3. Put on HLD or sterile gloves
4. Perform vaginal examination to confirm brow presentation

- Feotus
  - Identify frontal suture
  - Identify orbital ridges and bridge of nose

- Maternal
  - Ensure membranes are ruptured
  - Determine dilatation of the cervix
  - Determine station of the fetal head

5. If brow is confirmed:
   - Explain findings to patient
   - Perform venepuncture and take blood for grouping/cross matching
   - Set up IV infusion
   - Inform anaesthetist, theatre staff and supervisor
   - Prepare for Caesarean Section
6. Perform caesarean section

Transverse Lie

Antenatal

1. Recognize transverse lie
   - Determine fundal height
   - Identify fetal poles to confirm transverse lie
   - Determine position of head
2. Manage appropriately:
   - Request ultrasound examination
   - Perform ECV if not contraindicated

Labour

3. Palpate abdomen to confirm transverse lie
4. Wash hands with soap and water and dry with sterile towel
5. Put on HLD or sterile gloves on both hands
6. Perform vaginal examination to ascertain:

   - Cervical dilatation
   - Ruptured membranes; status of liquor
   - Cord prolapse, if any
   - Prolapse of arm or leg

- Palpate ribs, shoulder (scapula, acromion process)

7. Prepare patient for caesarean section
   - Group and cross match blood
   - Inform anaesthetist and supervisor

8. Perform caesarean section
   - Lower segment transverse uterine incision, or
   - Lower segment vertical incision, or
   - Upper segment vertical incision + BTL

Twin Pregnancy And Delivery

1. Suspect Twin Pregnancy
   - Uterus is larger than dates

2. Confirm twin pregnancy
   - In early pregnancy by ultrasound
   - In late pregnancy by
     - Abdominal palpation
     - Ultrasound
     - Occasionally by X-rays
3. Explain findings to patient
4. Outline management plan
5. Inform patient to come early in labour, or admit if necessary

TWIN LABOUR

1. Confirm that the lie of the leading twin is longitudinal
2. Set up IV line and take blood for grouping and X-matching
3. Ensure adequate pain relief
4. Inform supervisor, anaesthetist, paediatrician about twin labour
5. Monitor both fetuses
   - Preferably internal CTG for twin I
   - External CTG for twin II
6. Make sure delivery trolley is set up for 2 babies

DELIVERY

1. Deliver twin I as in appropriate delivery learning guide (NSVD, assisted breech delivery) clamp and cut cord
2. Palpate the maternal abdomen to determine lie of twin II and auscultate for heart sounds
3. If the lie is longitudinal
   - Perform V/E and rupture the membranes if no cord is felt
   - Add oxytocin to drip, if contractions are inadequate
   - Perform delivery of twin II
     - Use vaccum, forceps or assisted breech delivery, if indicated

4. If lie is oblique or transverse: Perform External Cephalic Version (ECV)
   - Ensure membranes are intact before performing ECV
   - Reassure and allay anxiety
   - Ask woman to bend knees slightly
   - Determine exact position of fetus
   - Determine fetal poles
   - Turn fetus by using steady pressure with one hand on either pole (turn in direction which will increase flexion – fetus follows its nose)
   - Stabilize when lie is longitudinal and presentation is cephalic
   - Do V/E and rupture membranes
   - Conduct normal vaginal delivery as in appropriate delivery learning guide

5. If membranes are ruptured and Twin II is in transverse lie and therefore require Internal Podalic Version And Breech Extraction,
   - Refer to supervisor

Uterine Inversion Correction

Pre-procedure

- Review for indicators
- Start an IV infusion
- Give pethidine 50mg and diazepam 10mg IV slowly (do not mix in the same syringe) general anaesthesia may be used
- Thoroughly cleanse the inverted uterus using antiseptic solution
- Apply compression to the inverted uterus with a moist, worm sterile towel

Procedure: - Manual Correction

- Wear a high level disinfected or sterile gloves
- Grasp the inverted uterus
- Push it through the cervix in the direction of the umbilicus to its normal anatomic position
- Stabilize the uterus using the other hand
- Manually remove the placenta if still attached after correction

Post Procedure Care

- Give oxytocin 20 units in 500ml IV fluid (normal saline/ gingers lactate)
- Increase drops to 60 drops per minute if haemorrhage is suspected
- Give prophylactic antibiotic cover
- Ampicillin 2g IV plus metronidazole 500mg IV
- Take and record vital signs
- Watch for signs of infection and give
  Ampicillin 2g IV 6 hourly
  Gentamicin 5mg/kg body weight IV every 24hours
- Repeat pethidine 1m 8hourly for 24hours

III. POST-NATAL CARE

A. OBJECTIVES

The post-natal period is the period from the end of delivery to six weeks after delivery. The major causes of death in this period are infection, hypertensive complications, haemorrhage and thromboembolism. Predisposing factors include:

i. Conditions or complications during the antenatal period
ii. Complications of labour, related to duration of labour and/or mode of delivery

The purpose of post-natal care is to maintain the physical and psychological well being of the mother and child. Post-natal care includes education of the mother on the care of her baby, and detection, treatment or referral of any abnormalities for further management. The essential components of post-natal care are therefore:

1. Comprehensive screening to detect complications in both mother and baby
2. Treatment of complications in mother and baby
3. Assessment and support for infant feeding
4. Malaria and anaemia prevention
5. Health education and counselling;
6. Family planning counselling and services.
7. Immunization services for mother and baby

B. ROUTINE MANAGEMENT

CREATE A CLIENT-FRIENDLY ENVIRONMENT FOR POSTNATAL CARE

Ensure that the following conditions that promote quality postnatal care are met:

- Consulting area provides privacy
- Clients and accompanying support persons are treated with respect and kindness
- Clinic area is clean and has toilet facilities and area for nappy changes
- Mother and baby care services are within same area
- Client receives continuing care from same provider as much as possible.

1. Schedule of Postnatal visits: There should be two review visits:

   i. The first visit should be within 3 days after delivery, in .a clinic if possible, or through a home visit by a TBA or Community Health Nurse or midwife if necessary. Follow-up visits may be necessary depending on findings during the first contact. Client should be encouraged to seek care at any time if she has any problem or concern relating to herself or her baby

   ii. The second scheduled visit should be six weeks after delivery.

2. First And Second Visits

Maternal Assessment

a. History Taking

Welcome client and establish rapport:

If client has maternal health record, quickly review for personal details, antenatal and delivery notes. If client has no maternal health records provide one and in addition take comprehensive history including history of recent pregnancy, labour and delivery outcomes, past obstetric history, medical and surgical history, family and social history.

Ask all clients about the following:

If she has any problems or concerns since delivery of her baby (Mother and Baby)

How she and her family is coping with new baby

Workload, rest and support

Baby's feeding and sleep patterns, stools, urine

Postpartum discomforts (. e.g. after pains, bladder and bowel function)

Presence of postnatal danger signs or symptoms in mother or baby (See pages 87, 89)

COMMON DISCOMFORTS OF POSTPARTUM PERIOD IN MOTHER		
After pains	Fatigue and sleepiness	Hair loss
Perineal pain	Sleeplessness	Headache
Bowel and urinary changes	Back pain	Haemorrhoids
Stretch Marks		Mood changes first week

MATERNAL DANGER SIGNS

Vaginal Bleeding (heavy or sudden increase)
Breathing difficulty
Fever
Severe abdominal pain
Severe headache and/or blurred vision
Convulsions / loss of consciousness
Foul smelling discharge from vagina
Painful and tender wound
Pain in calf with or without swelling
Pain on urination / dribbling urine
Persistent vomiting
Breasts that are red hot and / feel painful
Abnormal behaviour /threats may harm herself or her baby/hallucinations
Feeling especially sad or unable to care for herself or the baby.

MATERNAL EXAMINATION: examine mother from head to toe paying attention to the following:

b. General Examination: Observe her gait, mood, general cleanliness and behaviour towards baby, Check
   i. Temperature
   ii. Pulse
   iii. Weight
   iv. BP
   v. Conjunctiva for pallor

c. Examination of Specific Areas:

Breast: Examine for Lactation (i.e., flow of milk), sore/cracked nipples, and engorgement, warm and sore breast

Abdominal:
Inspect: operation wound (if she has had a C/S)
Palpate for tenderness and involution of uterus

Lower extremities: check for oedema, varicosities, and tenderness in calves

Perineum and external genitalia:
Inspect: overall appearance, lochia: flow, colour, odour, episiotomy/tears, swellings, Protrusions from vagina, Anal area for haemorrhoids.

Perform speculum and Bimanual pelvic examination if indicated (e.g. protruding vaginal lump, bleeding per vagina, inspection of sutured vaginal tears, involuntary urine loss per vagina,)

d. Conduct the following Laboratory Tests
   i. Blood for haemoglobin
   ii. Urine analysis

Newborn Assessment
a. History Taking
Ask about the following especially if baby was born at home or has no maternal pregnancy and delivery records:

Progress of pregnancy and presence of complications
Problems during labour and delivery
Immediate post delivery status and or/need for resuscitation and care received
Passage of first stools and urine
Feeding, crying and sleep patterns since birth
Birth weight if known
Presence of danger signs and symptoms

COMMON CONCERNS OF THE NEWBORN PERIOD

Head, Face Mouth and Eyes:
- Caput succedaneum
- Chignon or Cephal haematoma
- Subconjuctival Haematoma
- Swollen or red eyelids
- Tongue Tie

Skin
- Milia
- Diaper rash
- Mongolian blue spots
- Port wine stains (birth marks)

Chest, Abdomen and Genitatia
- Mucoid or bloody vaginal discharge
- Swollen breast with milk discharge
- Swollen labia/Swollen scrotal sac
- Tight fore skin
- Umbilical Hernia

Miscellaneous
- Crying
- Irregular breathing
- Startling reflex
- Vomiting (after feeds)
- Congenital Abnormalities

NEWBORN DANGER SIGNS

Breathing difficulty
Cyanosis / blueness/ colour not pink
Jaundice (yellowish colour of eyes and skin)
Bleeding spots/patches in skin
Diarrhoea persistent vomiting
Not feeding/poor suckling
Pus discharge from eyes, umbilicus or skin
Inactivity/lack of movement
Swollen joints or limbs or skull
Crying weakly or inconsolably
Hot to touch/fever
Cold to touch
Abnormal movement convulsion, twitching)
Pallor

b. Examination of Infant (Baby's first thorough examination is done within 6hrs)

Preparations for newborn examination:
Inform mother what you are going to do and encourage her to participate and ask questions
Wash hand thoroughly with soap and water and dry with clean cloth
Wear gloves
Place baby on a clean warm surface or examine in mothers arms
Have clean clothes and coverings ready to dress baby immediately after examination

Examine baby from head to toe:
Weigh baby at first visit and at six week visit
Observe the following:

Overall appearance /well being, / posture/ movements and obvious deformity

- Skin (colour rashes, septic spots) birth marks
- Head/neck -head size, symmetry fontanelle, sutures, swellings, deformities and shape
- Face and mouth: Symmetry, lips, palate, tongue tie
- Eyes –Colour of conjunctiva, discharge, cataract, squint or other abnormality
- Chest -breathing, and rate, retraction of chest, abnormal pulsations, and breast
- Abdomen and cord -distension, umbilical hernia, cord stump, tenderness
- External genitalia –deformities or indeterminate sex, undescended testis, labia adhesion, imperforate anus,
- Extremities -deformities (e.g. extra digits, webbed fingers or toes, joint movements, swellings over bones club feet) or inability to move limb
- Muscle tone and alertness
- Breast feeding (Check positioning and attachment and condition of the breast)
- Mother and baby Bonding (Physical contact, communication and maternal responses)
- Reinforce Kangaroo Mother Care where applicable

Refer if there is any abnormality e.g. difficulty in breathing, poor feeding talipes, cleft lip/palate excessive vomiting, and skin colour changes.

CARE OF MOTHER AND BABY

Client counselling and Education: Inform Mothers about the following issues during post-natal period.

Nutritional requirements for mother's health and breast-feeding: Advice should be given on the various foods groups in a balanced diet (see guide in Maternal health record) In addition encourage mother to drink at least 8 glasses of water each day if breast feeding. She should also avoid alcohol and tobacco, which decrease breast milk production.

Self care and Personal hygiene: Advice mother to

1. Keep genital area clean and dry,
2. Change perineal pads at least 4-6 hourly during first week and thereafter twice daily.
3. Avoid douching, insertion of herbal products and use of tampons.
4. Use clean cotton underwear, and use loose fitting clothing
5. Wipe genitals from front to back (Vulva to anus)

Rest and Activity: To facilitate healing after childbirth and cope with the demands of breastfeeding and child care the new mother will require adequate rest. Advise mother to have periodic rest during the day when baby is sleeping. During the first 4-6 weeks after delivery the woman should be encouraged to obtain domestic help and to delay returning to employment.

Post-partum exercises: Educate woman on the importance and types of post natal exercises (See pages 13 and 15 for abdominal and Kegel exercises respectively)

Sexual Relations and Safer sex: A woman should avoid sexual intercourse for at least two weeks after delivery or until after when lochia has stopped and perineal wounds have healed. After this time a woman can resume sexual intercourse whenever she feels ready and comfortable.

Inform her that she is more susceptible to sexually transmitted infections during the postnatal period. Using a condom consistently can help protect her against these infections.

Complication readiness: educate the mother on the signs and symptoms of maternal postnatal complications (See page 87)

Help her develop a complication readiness plan: (Where to go when complication starts, plan for financing and transportation, support person etc)

Family planning: Discuss future fertility plans with the woman and counsel on family planning. Inform her of return to fertility especially if not breastfeeding. If breast-feeding inform her about benefits and limitations of LAM. and encourage client to take advantage of family planning services.

Infant feeding: Encourage mother to breast feed exclusively (i.e. no other food or drinks) for 6 months. Give her the necessary support and advice to help her do so. Teach her how to deal with problems that may arise, such as sore nipples, difficulties with suckling, and inadequate breast milk.

Education: Educate her on:

- Danger signs in the baby and the need to seek early care.
- Malaria prevention using ITN.
- Immunisation scheduled for the baby

Psychological Support: Ask her about other childcare challenges and help her to address them (e.g. Bonding, family support,)

Administer Routine Drugs: Continue iron/folate supplementation

Tetanus Toxoid Immunzation Schedule: Continue if indicated

Immunization Of Baby

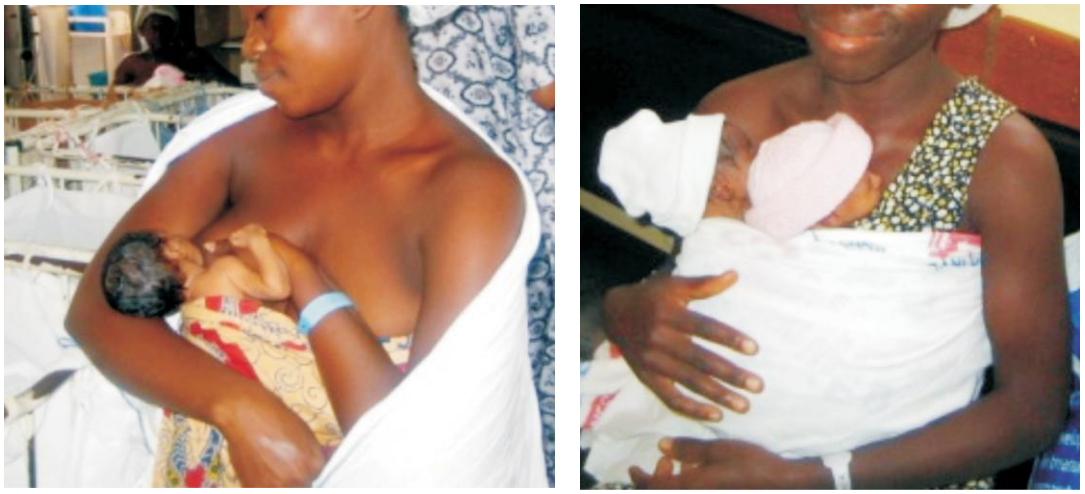
- BCG and OPVO. Give at first visit if baby did not receive this at birth
- OPV1 and Penta 1: Give at second postnatal visit at six week.

Schedule Next Visit: if women reported for first postnatal visit

- Encourage return to clinic at any time for any health problems or concerns
- Encourage woman/ partner / support persons to ask any questions and /or express concerns and respond to them appropriately

If a postnatal concern or complication is noted during any visit see portion on common discomforts/concerns during the postnatal period (pages 93 onwards).

Care Of The Low Birth-weight Baby



KANGAROO MOTHERCARE

Fig 7

1. A special form of care for Low Birth Weight babies (those less than 2.5kg)to keep them warm, encourage breastfeeding and encourage bonding.
2. Can only be used when baby is STABLE AND BREATHING WELL ON HIS OWN
3. The baby, wearing a napkin only, is placed naked between his mother's breasts tied there with a cloth. The baby can be tied the same way as the mother would do when tying her baby to her back. She may decide to wear a blouse over the baby before tying the cloth in place or may just place the baby between her breasts and tie him with her cloth.
4. The cloth can be loosened to allow the mother sit down and breast feed or express breast milk and feed by cup
5. She may sleep with the baby in this position if she is comfortable and can go do her daily chores with the baby in this position.

C. MANAGEMENT OF COMMON DISCOMFORTS/CONCERNS IN THE POST NATAL PERIOD (MOTHER)

DISCOMFORT/CONCERN (Signs/Symptoms)	Prevention, Relief measures and Reassurance	Alert signs that may indicate a problem
After pains; Cramps/ contraction as in labour, Common in multipara, Postpartum Days 2-4 and during Breastfeeding	Explain physiological basis: Due to uterine contraction Breastfeeding increases chemical that causes uterus to contract Provoked by full Bladder Relief measures Walk around or change position Lie face down with pillow under abdomen Gently massage lower abdomen Apply warm cloth or hot water bottle Empty bladder frequently Take paracetamol 500-1000mg 30 minute before breast feeding if above measures do not help	Uterine tenderness Abdominal distension Burning urination
Perineal Pain Occurs during post partum weeks 1-2	Explain: Due to tissue trauma during delivery Relief measures Advise to maintain good perineal hygiene Soak area in warm tub or sitz bath Apply ice packs (wrapped in cloth) Breast feed lying down or sit on cushion with hole middle (e.g. inner tube of tyre) May Take paracetamol 500-1000mg or Ibuprofen 400mg if above measures do not help	Sloughing or reddened tear of episiotomy site, Pus discharge from wound all indicating infection Purplish swelling indicating haematoma
Fatigue and sleepiness Common in first week postpartum	Explain: Is normal reaction to hard work of labour Interrupted sleep to feed and care for the baby Emotional and physical stress of additional Responsibilities Relief measures Take a nap when baby sleeps and whenever possible Advise partner/family to share some of responsibilities for newborn care and household chore	Associated: Dizziness/fainting/palpitations/breathlessness/pallor that may indicate anaemia. Insomnia /excessive sadness that may indicate depression Hallucinations/suicidal thoughts that may indicate puerperal psychosis
Mood changes Common during postpartum week 1-2 In adolescents/primipara	Reassure: Tell her she is capable of taking care of her baby and can do a good job Praise her for things she is doing right however small Allow her to ask questions and discuss her anxieties. Do not overwhelm her with too much information at one time	Crying /feelings of sadness/ or being overwhelmed between days 3-4 which may indicate postpartum blues Insomnia /excessive sadness that may indicate depression

DISCOMFORT/CONCERN (Signs/Symptoms)	Prevention, Relief measures and Reassurance	Alert signs that may indicate a problem
	Avoid unrealistic expectations for herself Advise partner/family to encourage and support in caring for newborn	Hallucinations/suicidal thoughts may indicate puerperal psychosis
Back pain Common in first week postpartum but may persist due to poor posture during breast feeding	Explain: Effect of pregnancy hormones on muscles and ligament support joints May be due to poor breastfeeding posture, poor body mechanics and Increased breast size Relief measures Advise to use good body mechanics e.g. during lifting (When lifting squat rather than bend, keep spine erect so that thighs/legs bear the weight and strain). Do not lift anything heavier than your baby for the first few weeks postpartum Wear well fitting / supportive brassier Sleep on firm mattress or surface Apply ice pack / hot pad to area Apply gentle massage over area Take paracetamol 500-1000mg or Ibuprofen 400mg if above measures do not help	Associated lower abdominal tenderness, and distension may indicate infection Flank/loin pain with burning on urination may indicate urinary tract infection Numbness, muscular weakness or wasting, difficulty walking, urinating or defecating which may indicate nerve disease

KEY:
⟹STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

D. MANAGEMENT OF POSTNATAL COMPLICATIONS (MOTHER)

COMPLICATION/ PROBLEM	COMMUNITY LEVEL (TRADITIONAL BIRTH ATTENDANT (TBA), CHO)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C DISTRICT HOSPITAL
1. Post partum haemorrhage (Secondary -24 hours or more after delivery) Continuous slow bleeding Sudden bleeding or increase in bleeding	⟹ Examine and identify the following conditions: • Bright red bleeding after delivery, with or without clots. • A tender, bulky uterus If bleeding is continuing ⟹ Massage uterus until it is firm If CHO ⟹ Administer 800 mcg (4 tablets) of misoprostol rectally ⟹ Record treatment given and amount of blood loss observed. ⟹ Explain to patient /family the need for urgent referral to facility with surgical and blood transfusion services ⟹ Encourage drinks, NO SOLID FOOD ⟹ Organise blood donors to accompany patient - ⟹ Assist client/ family arrange emergency transport ⟹ REFER/ and accompany patient to hospital if possible	⟹ Do Quick assessment of woman to determine general condition of woman, to confirm diagnosis, and determine cause of bleeding ⟹ Review any referral notes for treatments already given ⟹ Assess: Total amount blood loss through interview and observation of bed clothes and pads ⟹ Check BP, pulse, temperature, and assess for shock; check for pallor (If in shock begin IV fluid and resuscitation immediately. If not in shock, keep shock in mind as you evaluate further) ⟹ Examine abdomen to check for uterine size, firmness, and tenderness. If uterus is not contracted ⟹ Massage to stimulate contractions and also expel any blood clots ⟹ Do vulva/vaginal examination ⟹ Remove any clots/product in vagina ⟹ Inspect perineum /vagina/Cervix for any bleeding sites ⟹ Check if cervix is open and if products can be felt within ⟹ Set up IV access line; take blood for grouping and x-matching. Start IV fluid infusion (Normal saline or Ringers Solution) if in shock or bleeding is continuing. (See flow chart for Shock Management. ⟶ Give inj. Oxytocin IV 10 units IM and add 20 units to 500 mls IV fluid.	Same steps as for Health Centre ⟹ Evaluate patient further to determine cause of bleeding. Manage shock and severe anaemia if present. ⟶ If in shock Continue with IV fluid resuscitation (See shock management page 199) Give blood transfusion if indicated. ⟹ Re –evaluate to determine underlying cause of bleeding: • Obtain history of recent pregnancy, labour /delivery, baby and postpartum. • Ask about: Fever, abdominal pain, and offensive lochia. • Examine abdomen for uterine subinvolution and signs of infection • Do vaginal examination to determine: If Cervix is dilated indicating possible retained placental tissues. If there are birth tract injuries. Further examination under anaesthesia may be needed.

COMPLICATION/ PROBLEM	COMMUNITY LEVEL (TRADITIONAL BIRTH ATTENDANT (TBA), CHO)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C DISTRICT HOSPITAL
	⟹ REFER/and accompany patient to hospital if possible	(See flow chart for Shock Management. Give inj. Oxytocin IV 10 unit IM and add 20 units to 500 mls IV fluid If bleeding is profuse and/or persists do the following: ⟹ Repeat Oxytocin infusion ⟹ Administer Misoprostol rectally 800mcg stat If trained ⟹ Do Bimanaual compression of uterus and/or Aortic compression ⟹ Pass urine catheter to monitor urine output ⟹ Start broad-spectrum antibiotic (e.g. Ampicillin 2 g IV or amoxycillin 2g orally and metronidazole 500 mg). ⟹ Arrange prompt transfer to hospital If patient is stable and/or bleeding stops: ⟹ Admit and observe patient for at least 24 hours and ⟹ REFER ⟹ Give iron and folic acid therapy ⟹ Continue Amoxicillin and metronidazole regimes for at least one week	⟹ Do investigations, including • FBC • Grouping and cross matching, of 2 or more units blood • High vaginal swabfor C/S Blood c/s, • Ultrasound scan. (If indicated) If profuse and continuing bleeding Suspect retained products, ruptured uterus/ Cervical or vaginal tears ⟹ Continue resuscitation, IV antibiotics and prepare patient for theatre ⟹ Perform operative treatment (e.g., evacuate uterus, repair any tears, laparotomy) Post surgery: ⟹ Monitor closely:for – severe anaemia, – wound infection, – uterine subinvolution and sequaelae of severe shock e.g. renal failure, lactation failure.
2. Raised blood pressure BP> 140/90mmHg	Manage as specified in section on antenatal care, page 17		

COMPLICATION/ PROBLEM	COMMUNITY LEVEL A (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
3. Puerperal Pyrexia/Sepsis a) Upper genital tract infection	⟶ REFER women with complaints of: • Profuse offensive vaginal discharge with/without bleeding (lochia) • Fever • Abdominal pains Before patient leaves for health facility ⟶ Remove any foreign materials in vagina e.g. herbs. If fever is present: ⟶ Give plenty of drinks ⟶ Give paracetamol 1000mg (2 tablets)	⟹ Do rapid evaluation to confirm diagnosis and determine condition of woman: ⟹ Check level of consciousness, pallor, Temperature, BP and Pulse If in shock start immediate resuscitation see page 119 ⟹ Examine abdomen for distension, uterine size and tenderness. ⟹ Inspect external genitalitia for lochia ⟹ Assess severity of infection: If infection is mild and patient is stable then ⟹ Start broad spectrum oral antibiotics: course Arnoxycillin and Metronidazole ⟹ Start analgesics: Paracetamol ⟹ Encourage adequate intake of oral fluids ⟹ Check Blood for Hb, Mps and urine RE ⟹ Admit and observe progress for at least 48Hours. If patient recovers/improves ⟹ Educate on personal hygiene ⟹ Monitor closely for uterine subinvolution ⟹ Educate on this complication and future implications. ⟹ REFER and if possible accompany patient. If Infection is severe at admission or condition has worsened during period under observation (Patient is gravely ill, vital signs are unstable altered level of consciousness)	Same steps as for health centre level ⟹ Evaluate patient further to determine underlying cause of infection ⟹ Review any referral notes for treatments already given ⟹ Take comprehensive history: including labour/delivery history, pregnancy outcome and postnatal health. Ask if patient has existing risk preconditions such as HIV infection or diabetes Mellitus. ⟹ Examine patient thoroughly • Assess the severity of infection: (Signs of septic shock, haemolysis, severe anaemia) and the specific area involved • Examine abdomen for distension, hepatosplenomegally, presence of abnormal masses e.g. abscess • Conduct bimanual/pelvic examination: check for opened cervical os, uterine tenderness and subinvolution, abnormal pelvic masses,/swellings, ⟹ Conduct investigation (Hb, WBC, HVS for c/s, blood c/s, urine c/s, Pelvic ultrasound, HIV); From above determine if there are other underlying causes for severe sepsis e.g.: Retained products, pelvic abscess, peritonitis, septicaemia, HIV)

COMPLICATION/ PROBLEM	COMMUNITY LEVEL A (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
		Before and/or during transfer of patient ⇒ Start IV antibiotic: Ampicillin 2 g IV Gentamicin 80 mg IV ⇒ Give Tablet Paracetamol if Temperature is higher than 38 C ⇒ Set up IV fluid: Normal saline and monitor Vitals signs closely	→ Start and maintain IV fluid rescusitation ⇒ Give Broad spectrum antibiotics (Change to recommended drugs when c/s results are available. → Correct anaemia and nutritional deficiencies ⇒ Treat /mange promptly underlying causes (e.g.: laparatomy, evacuation of uterus, ART if indicated)
4. Lower genital tract infection e.g. Infected episio-tomy/perineal laceration	Woman complains of: • Severe perineal pain • Offensive vaginal discharge with/without bleeding (lochia) • Fever ⇒ Check for • Offensive vaginal discharge • Gaped /infected episiotomy or tear wound • Perineal swelling and/or tenderness • Fever ⇒ Remove any foreign materials in vagina e.g. herbs before patient leaves for health facility ⇒ REFER If fever/pain is present: ⇒ Give plenty of drinks ⇒ Give paracetamol 1000mg	<u>Same as at community level</u> ⇒ Evaluate the patient as follows: ⇒ Check Temp, BP, Pulse and for pallor ⇒ Examine abdomen for uterine tenderness and size ⇒ Inspect the perineum and vagina to determine extent and nature of problem: • Infected vaginal lacerations • Perineal abcess • Infected /gaped episiotomy/tear • Perineal haematoma → Check Hb for anaemia If any of the above is present: → Advise sitz baths (salt water, potassium-permagnate ⇒ Give broad-spectrum antibiotic (amoxycillin and metronidazole) ⇒ Give analgesics (Paracetamol/Ibrupofen) ⇒ Teach perineal hygiene ⇒ Teach to breast feed lying down/or sit on ring cushion ⇒ Provide nutritional advise ⇒ Monitor progress	Same as Health centre level: ⇒ Review referral notes if available for prior managements. Take comprehensive history: including labour/delivery history, pregnancy outcome and postnatal health. Ask if patient has existing risk pre-conditions such as history of previous breast disease, HIV infection or Diabetes Mellitus. Examine patient thoroughly: ⇒ Assess the severity of infection: (Signs of septic shock,) ⇒ Examine abdomen for signs of abdomino pelvic involment) e.g. distension, hepato-splenomegally, presence of abnormal masses e.g. pelvic abscess ⇒ Conduct speculum / bimanual pelvic examination: vagina to determine extent and nature of problem: → Conduct investigation (, Hb, WBC, HVS /Wound swab for cIs, urine re Pelvic ultrasound, HIV, FBS if indicated);

COMPLICATION/ PROBLEM	COMMUNITY LEVEL (TRADITIONAL BIRTH ATTENDANT (TBA), CHO)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C DISTRICT HOSPITAL
	(2 tablets) ⟶ Advise on sitz baths of warm water ⟹ Teach perineal hygiene Teach to breast feed lying down/or sit ring cushion	If • No improvement after 72 hours • An abscess forms, worsens or persists • There is a 3rd degree tear ⟹ REFER If patient improves and infection of a gaped tear or episotomy resolves: ⟹ Resuture and monitor healing on OPD basis	⟹ Institute appropriate antibiotic therapy ⟹ Manage any underlying risk conditions e.g. Diabetes, HIV ⟹ Check for abscess or haematoma if present incise and drain If infection of gaped perineal wound resolves resuture ⟹ Refer for specialist care if patient develops vaginal fistula, (e.g. Rectal, Vesical) vaginal stenosis
5.Thromboembolism Deep vein Thrombosis (Clotting of blood in leg veins) Pulmonary embolism	Woman complains of pain in calf muscles of leg with/or without swelling, Fever. Sudden attack of difficulty in breathing, coughing with pinkish sputum. ⟹ Refer promptly to Hospital and accompany woman if possible: During transfer	<u>Same as Community level</u> ⟹ Conduct Rapid assessment of woman if: – Breathing difficulty – Cough with frothy bloody/pinkish sputum – Cyanosis (Blue discolouration of tongue) – Signs of Shock – Altered level of consciousness ⟹ Keep airway clear/ Position woman on left lateral position ⟹ Start IV access line with Normal saline (20-40 drops /min and ⟹ Transfer to Hospital Immediately	Same as Health Centre Conduct Rapid assessment of woman to confirm diagnosis: If – Breathing difficulty – Cough with frothy bloody/pinkish sputum – Cyanosis (Blue discolouration of tongue) – Signs of Shock – Altered level of consciousness ⟹ Start Resuscitation: • Clear Airway and Give oxygen • Stat IV access line with Normal saline • Start anticoagulant therapy (once diagnosis is made) If client is Stable ⟹ Take History: Ask about medical history of thromboembolism, Pregnancy labour/delivery and postpartum history ⟹ Examine. Check Vital • Chest and respiratory system • Abdomen and groins for tenderness • Lower extremities

COMPLICATION/ PROBLEM	COMMUNITY LEVEL (TRADITIONAL BIRTH ATTENDANT (TBA), CHO)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C DISTRICT HOSPITAL
			⟹ Do Investigations: (Hb, WBC, Platelets, clotting time, urine r/e, pelvic ultrasound, chest X-ray) If diagnosis is confirmed: ⟹ Monitor Vitals closely ⟹ Start anticoagulant therapy and monitor clotting status ⟹ Regularly treat underlying causes e.g. Pelvic infection
6. Urinary tract infection	Manage as specified in section on antenatal care, see page 26		

COMPLICATION/ PROBLEM	COMMUNITY LEVEL A (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
Breasts conditions 1.Cracked/sore nipple	Patient complains of sore nipples and /or painful breastfeeding; ⟹ Observe breastfeeding technique ⟹ Inspect nipples for extent of lesion ⟹ Advise on: • Correct breast feeding techniques (i.e., make sure the surrounding area as well as the nipples are in the infant's mouth, and that the infant's position is changed during breastfeeding) • To start feeding on the side that is less sore When removing the baby from the breast to break suction gently by; Pulling on the baby's chin or by placing one finger in the corner of the baby's mouth • To apply breast milk to affected nipple after feeding and expose (air dry) • Not to use soaps or alcohol on the nipples • To wear well fitting supportive brassier (avoid tight brassieres that may irritate nipple and aggravate pain) If above measure do not provide relief she can take two tablets of paracetamol 30 minutes before breast feeding. ⟹ Monitor progress; If condition persists for more than one week and/or is interfering with breast feeding: ⟹ REFER	<u>Same steps a for Community Level</u> ⟹ Take history: Ask if there are other breast feeding difficulties and about maturity and health condition of baby ⟹ Examine the woman; • Check her vital sign (Temp, Pulse BP) and for pallor • Examine breasts: • Inspect for Swelling/redness nipple sores/ Plus discharge • Palpate for tenderness/ lumps / fluctuant area ⟹Examine Baby: for general well being • Check for adequacy of urine • Examine mouth and palate for abnormality If Mastitis or abcess is present: (Fever, swollen hot and tender breast, with or without pus discharge) See section … below. ⟹ Refer baby if poor general condition and/or mouth/palate abnormality.	<u>Same steps as for Health Centre</u> ⟹ Manage appropriately or REFER to next Level
2.Engorgement (breast painful,Breast looks tight and shiny)	If trained in lactation management ⟹ Help mother to express breastmilk ⟹ Help mother to attach baby to breast ⟹ If baby can not suckle at all ⟹ Give him or her expressed breastmilk before REFERRAL ⟹ Educate mother to continue to express as often as necessary to make breast comfortable until engorgement stops If not trained in lactation management refer to next level	<u>Same steps as for level A</u> ⟹ Do a thorough newborn assessment • Examine for mouth abnormalities • Determine cause of poor feeding If there is a newborn danger sign ⟹ REFER to Level C If there is no danger sign ⟹ Support mother to breastfeed	⟹ Manage baby's condition appropriately ⟹ Support mother express breast milk and feed baby by cup

COMPLICATION/ PROBLEM	COMMUNITY LEVEL A (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
3. Mastitis (painful, hot tender breast)	Patient complains of soreness of breast and/or fever, and painful breastfeeding; ⟹ Examine breast: If breast is tender, hot and swollen. ⟹ REFER Before woman leaves to next level ⟹ Encourage her to continue breastfeeding ⟹ Advise her to: • Wear well fitting brassiere • Apply cold compresses to breast between feeding to reduce pain and swelling ⟹ Give paracetamol (Two Tablets) ⟹ Encourage to drink at least 12 glasses of water daily	<u>Same steps as for Level A</u> Take history: • Ask about breast-feeding difficulties and about health condition of baby. • Onset and duration of symptoms. ⟹ Confirm diagnosis • Examine the woman; - Check her vital sign (Temp, Pulse BP) and for pallor • Examine breasts: - Inspect for Swelling/redness nipple sores/Pus discharge - Palpate for tenderness/lumps/fluctuant area ⟹ Examine Baby for • General well being • Check for weight gain/loss If Mastitis (Fever, swollen hot and tender breast, with or without pus discharge) ⟹ Give analgesics: paracetamol two tablets tid daily as needed ⟹ Give antibiotics (e.g. amoxycillin 500 mg tid or cloxacillin 500mg qig for 7-10 days ⟹ Encourage increased fluid intake and rest ⟹ Monitor and review after 72 hours ⟹ REFER: If no improvement after 72 hour Abcess develops Baby is in poor general condition	<u>Same steps as for Level B</u> ⟹ Take comprehensive history: including, pregnancy, labour/delivery history and postnatal health. Ask if patient has existing risk pre-conditions such as HIV infection, Diabetes Mellitus or history of previous breast disease. ⟹ Examine patient thoroughly: • Assess the severity of infection: (look for signs of septic shock,) • Examine abdomen, pelvis and lower extrimities ⟹ Conduct investigation (Hb, WBC, Breast milk /Wound swab for cIs, urine re, HIV, FBS if indicated); ⟹ Institute appropriate antibiotic therapy ⟹ Manage any underlying risk conditions e.g. Diabetes, HIV. If HIV positive advise to stop breastfeeding from affected breast or heat treat milk from affected breasts ⟹ Do incision and drainage if abcess present

COMPLICATION/ PROBLEM	COMMUNITY LEVEL A (CHO, TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE
4. Breast abscess	Patient complains of Painful breast swelling with or without pus discharge, and fever, Examine breast: If breast is tender, swollen, hot and/or discharging pus. ⟹ REFER Before woman leaves to next level: ⟹ Advise: • Unless there is obvious pus discharge from affected breast nipple or severe pain encourage her to continue breastfeeding • To wear well fitting brassiere • Apply cold compresses to breast between feeding to reduce pain and swelling ⟹ Give paracetamol (Two Tablets) ⟹ Encourage to drink at least 12 glasses of water daily	⟹ Take history: • Ask about breast feeding difficulties and about health condition of baby - Confirm diagnosis • Examine the woman; - Check her vital sign (Temp, Pulse BP) and for pallor • Examine breasts: - Inspect for Swelling/redness nipple sores/ Pus discharge - Palpate for tenderness/ lumps / fluctuant area ⟹ Examine Baby for: • General well being • Check for weight gain/loss If Abscess is confirmed (Fever, swollen hot and tender breast, with fluctuant mass with or without pus discharge) ⟹ Give analgesics: paracetamol two tablets tid daily as needed ⟹ Give antibiotics (e.g. amoxycillin 500 mg tid or cloxacillin 500mg qig for 7-10 days ⟹ Encourage increased fluid intake and rest ⟹ Monitor and review after 72 hours ⟹ Encourage to continue Breastfeeding ⟹ REFER If no improvement after 72 hours Baby is in poor general condition ⟹ Encourage increased fluid intake and rest ⟹ Monitor and review after 72 hours

KEY:
STEPS IN IDENTIFICATION AND MANAGEMENT OF CONDITIONS/COMPLICATIONS

E. MANAGEMENT OF POSTNATAL COMPLICATIONS (BABY)

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
1. Asphyxia	If infant has trouble breathing (irregular or slow breaths. or grunting) ⇒ Clear airways ⇒ REFER	⇒ Assess heartbeat and respiration; If no breathing and heartbeat 100 bpm ormore: ⇒ Wrap baby and clear airways ⇒ Tilt head back, place hand on abdomen ⇒ Give baby short rapid breaths (at least 40/min,) until baby's colour is pink using AMBUBAG OR SKAMGOA If heartbeat < 100 bpm, combine with cardiac massage as follows: ⇒ Place index and middle fingers on baby's sternum ⇒ Alternate cardiac compressions with breathing (3 compressions to 1 breath)	Same steps as in Level B ⇒ Give oxygen

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
2. Ophthalmia Neo-natorum	⇒ Wipe eye discharge with clean damp cloth or cotton wool, from inside to out; and ⇒ REFER	⇒ Take history of onset and duration ⇀ Swab eyes with saline and instill antibiotic drops or ointment (tetracycline, soframycin, or chloramphenicol) every 15 mins, for 1st hour, every 30 mins for next 2-3 hrs. ⇒ Give afriaxone 20-50 mg/kg (max 125mg) or kanamycin ⇉ Give erythromycin 50mg/kg daily (4 doses/day) for 10-14 days ⇒ Treat mother and partner and counsel on STD prevention ⇒ Monitor progress; if no improvement after 72 hours: ⇒ REFER	⇒ Take history of onset ⇉ Do lab investigation: microscopy and c/s of eye discharge ⇀ Cervical swab of mother for microscopy ⇒ Give specific antibiotic therapy ⇒ Wipe eye with sterile cotton woo1 as necessary ⇒ Instill eye ointment or drops (preferably tetracycline or chloramphenicol) Long-term follow-up and ophthalmologist review may be needed

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
3. Septic Skin Spot	⇒ Assess size of lesion; if limited: ⇒ Apply gentian violet ⇒ Advise on: • Hand washing before handling baby If lesion is extensive, if there is fever or if no improvement after 72 hrs of treatment: ⇒ REFER	Same steps as for Level A ⇒ Give suspension cloxacillin 62.5mg qid for 5-7 days ⇒ Monitor progress: If no improvement after 72 hours, if condition worsens or If signs of systemic infection (fever, jaundice and vomiting) ⇒ REFER	Same steps as for Level B ⇒ Do lab investigations, including: • Skin swab for c/s • FBC • Blood culture if indicated ⇒ Institute prompt specific antibiotic therapy

COMPLICATION/ PROBLEM	LEVEL A COMMUNITY & CHO	LEVEL B HEALTH CENTRE	LEVEL C DISTRICT HOSPITAL AND REGIONAL LEVEL
4. Mastitis Neonatorum (breast engorgement)	⇒ Avoid undue manipulation of the en-gorged breast ⇒ Assess breast. If warm and red. ⇒ REFER	⇒ Check temperature: If there is fever, local heat, swelling and tenderness ⇒ Give suspension flucloxacillin → Monitor progress. If no improvement after 72 hours. ⇒ REFER	Same steps as for Level B ⇒ Monitor progress; If recovery is delayed or abscess develops: ⇒ Take discharge material for c/s ⇒ Incise and drain abscess ⇒ Start specific antibiotic therapy
5. Twitching and convulsions	⇒ Clear airway if necessary ⇒ Keep warm (do not sponge down. and do not give paracetamol ⇒ REFER to hospital immediately	⇒ Same steps as for Level A ⇒ Give oxygen, if necessary ⇒ Give anticonvulsants: • Phenobarbitone IM (5mg/kg body weight) ⇒ Give ampicillin IM (25mg/kg body weight) ⇒ REFER	⇒ Same steps as for Level B ⇒ Give 50% Dextrose IV: 1-2 mls/kg over 3 mins. ⇒ Follow-up with 5% Dextrose 50 mls/kg over 24 hrs. ⇒ Give anticonvulsant (as for Lever B) → Identify and treat cause of seizure

COMPLICATION/ PROBLEM	LEVEL A TRADITIONAL BIRTH ATTENDANT (TBA)	LEVEL B HEALTH CENTRE/COMMUNITY MIDWIFE	LEVEL C FIRST REFERRAL OR DISTRICT HOSPITAL
6. Cord infection	Clean cord with spirit. ⟹ Examine cord and surrounding area: If there is odour and pus from a wet cord, or fever and redness of skin around the cord: ⟹ Refer	⟹ Examine for signs of systemic infection (temperature. Enlarged spleen or liver. Anaemia): If infection is suspected ⟹ Give oral antibiotics (cloxacillin) ⟹ Ensure cord hygiene: clean with methylated spirit. ⟹ Monitor progress; If no improvement after 72 hours or if condition worsens ⟹ Refer	Same steps as for level B ⟹ Monitor for signs of septicaemia ⟹ Treat infection with appropriate antibiotics
7. Jaundice	If any yellowing of eyes: ⟹ REFER	⟹ Assess duration and severity of jaundice (onset and symptoms such as fits. Fever. Vomiting): If mild with no other symptoms ⟹ Protect the eyes and advise of sun bath ⟹ In early morning and/or late afternoon for 1 hr daily until condition improves ⟹ Monitor progress; If jaundice is worsening or signs of kernicterus. (E.g. shrill cry. Vomiting. Fits or poor feeding): ⟹ REFER	Same steps as for Level B ⟹ Identify cause and severity of jaundice ⟹ Conduct lab investigations, including FBC, reticulocyte, blood group, bilirubin, blood c/s: then ⟹ Manage appropriately

SAFE MOTHERHOOD IEC TOPICS

SAFEMOTHERHOOD IEC TOPICS

A. COMMUNITY AND FACILITY IEC TOPICS FOR YOUNG PEOPLE

1. Healthy Sexuality
   - Meaning of sexuality
   - Types of sexuality
   - Highlights of healthy and unhealthy sexuality
   - Benefits of maintaining healthy sexuality

2. Premarital Examination
   - Vital blood tests
     - Blood group identification
     - Rhesus factor identification
     - Detection of diseases in the blood e.g. HIV
   - Gynaecological examination
   - Andrological examination

3. Pre-Conception Care
   - Target groups for pre-conception care
   - Genetic factors
   - History of genetic diseases such as sickle cell, diabetes, etc
   - Risk factors to non-communicable and communicable diseases e.g. smoking, drinking alcohol, excess weight, little or no exercise, rest and relaxation, drinking unwholesome water and eating unprotected food
   - Risk factors to injuries
   - Examinations for use as measure of progress in health status
   - BMI check
   - Hb check
   - Stool check for worms, typhoid fever
   - Gynaecological check for early identification and management of problems
   - Other

   - Educate on available interventions
     - Health education on personal and environmental hygiene, adequate nutrition and healthy lifestyle, prevention of unsafe abortion, STIs, unwanted pregnancies, and injuries.
     - Management of abnormal conditions detected.

4. Special Information on Adolescent Pregnancy
   - Educate on the following:
     - Ways of confirming pregnancy

Breaking news of pregnancy to partner and ways of dealing with different responses

Risks associated with unsafe abortion

Why pregnant adolescents should visit the clinic on a regular basis through pregnancy, labour and delivery to post-natal periods.

- Educate on the following:
  - Importance of regular antenatal visits
  - Importance of delivery at clinic
  - Importance of attending postnatal visits

B. COMMUNITY AND HEALTH FACILITY IEC TOPICS ON ANTENATAL CARE

1) Female and Male Anatomy
- Describe male and female reproductive tract indicating functions of each organ

2) How conception occurs
- Sexual intercourse
- Process of fertilization
- Foetal growth and development (physical and psychological)
- Changes that occur in the female body during pregnancy (highlight physical changes, psychological changes, etc

3) The Importance of ANC
- Aims of ANC
- Focused antenatal care with emphasis on care provided by skilled provider
- When to initiate antenatal care and why?
- Provide list of specific problems in ANC e.g sickle cell, diabetes, hypertension and
- Danger signs and symptoms during pregnancy
- Importance of referrals at different levels
- Do's and Don'ts in pregnancy (e.g no smoking and drinking alcohol)
- Myths/misconceptions
  - Nutrition
  - Pregnancy detection and announcement
  - Foetal movements(expectation of foetus)
  - Meanings of physical changes in the pregnant mother
  - Beliefs concerning preparation towards confinement
- Immunization of mother

4) Importance of Good Nutrition
   - Emphasize on diets that have a combination of more fruits and vegetables, moderate amounts of protein and adequate amount of carbohydrates using examples of local food items
   - Avoid intake of fatty diets, alcohol and smoking in pregnancy and other poor nutritional practices that are peculiar to the community
   - Educate on anaemia prevention during pregnancy and its importance during and after pregnancy for mother and foetus.

5) Medication During Pregnancy
   - Educate on importance of drugs given during pregnancy , how and where to obtain medication
     - Anti-malaria
     - Anti-helminthic preparations
     - ARV drugs
     - Haematinics
     - Chronic disease medication (e.g. antihypertensives)
     - Dangers of self-medication

6) Healthy Lifestyle During Pregnancy
   Educate on the following:
   - personal hygiene (skin, clothing, breasts, genital area, hands and feet)
   - environmental hygiene (ventilation, waste disposal, etc)
   - ITN use
   - rest and relaxation (reduction in workload, making time for rest, and relaxation,)
   - appropriate exercises in pregnancy (mention what exercises)
   - negative and positive traditional practices in pregnancy
   - effects of alcohol, cigarette on the health of both mother and foetus
   - the effects of jobs that have harmful effects on pregnancy for mother and foetus

7) Basic Information on what to Expect During Pregnancy
   - Physiological changes during pregnancy
   - Danger signs and symptoms in pregnancy(e.g. miscarriage/abortion) and appropriate action to take
   - STIs including HIV in pregnancy and their effects on mother and baby
   - Psychology of the foetus and its environment (emphasize foetal responses to mother's behaviour, environmental influences, etc)
   - Making safe birth kits that are cost-effective

C. COMMUNITY AND FACILITY IEC TOPICS ON LABOUR AND DELIVERY

1. Use of services of skilled providers
   - Categories of skilled providers approved by policy
   - Advantages of using the services of skilled providers
   - Reasons for use of delivery services in an approved health facilities
   - Mothers who should not miss the services of particular skilled providers

2. Preparation towards delivery
   - Educate mother support team and community on what to expect if one decides to obtain skilled delivery in an approved facility or at home
   - Educate on recognition of labour, normal labour and abnormal labour (emphasize education on the normal process of labour and indicate that any deviation must be taken seriously)
   - Need for blood donation in case transfusion is needed
   - Partner/family/community specific support that can be provided
     - Encourage woman and partner to save money for any eventualities during pregnancy, labour and delivery

3. Hospital/Health Facility Procedures during Labour and Delivery
   - Need for client to provide correct information
   - Educate on procedure for labour and delivery

4. Educate on PMTCT and mother's role during labour and delivery
   - Need to continue ARV regime if already started
   - Need to start ARV after onset of labour and follow regimen
   - Need for ARV for the newborn.

D. COMMUNITY AND FACILITY IEC TOPICS ON POST-NATAL CARE

1. Importance of Post-Natal Care

   a. Care During Immediate Post-partum Period
      - Educate on the following:
        Reporting for first postnatal visit within 3 days of delivery.
        Initiation of breastfeeding if that is the choice
        Importance of mother-baby bonding.
        Compliance with any prescribed drugs
        Immunization.
        Danger signs in mother and neonate .
        Care of breasts, genital area and umbiblical cord

b. Care during the Late Post-partum Period

- Educate on the following:
  - Reasons for seeking care
  - Importance of exclusive breastfeeding
  - Infant care at home
  - Immunization for mother and baby
  - Importance of good nutrition
  - Dangers of self-medication for both mother and baby
  - Family planning with emphasis on all modern methods available to enable mother make an informed choice

2. General well being of Mother and Baby

- Educate on the following:
  - PMTCT and its importance
    - Safe sex
    - Infant feeding
    - Continuing ARV regimen (where applicable)
  - Care of the newborn, recognition of danger signs in the newborn and early care-seeking
  - Birth registration
  - Common concerns of the newborn period
  - Breast care and breastfeeding
  - Appropriate nutrition, exercise, rest and relaxation for mother
  - Family planning
  - Birth defects and appropriate responses

ANNEXES

ANNEX 1: SHOCK

Shock is characterized by failure of the circulatory system to maintain adequate perfusion of the vital organs. Shock is a life-threatening condition that requires immediate and intensive treatment.

Suspect or anticipate shock if at least one of the following is present:

Bleeding in early pregnancy (e.g. abortion, ectopic or molar pregnancy);
Bleeding in late pregnancy (e.g. placenta praevia, abruptio placentae, ruptured uterus);
Bleeding after childbirth (e.g. ruptured uterus, uterine atomy, tears of genital tract, retained placenta or placental fragments);
Infection (e.g. unsafe or septic abortion, amnionities, metritis, acute pyelonephritis);
Trauma (e.g. injury to uterus or bowel during abortion, ruptured uterus, tears of genital track).

Signs And Symptoms

Diagnose shock if the following symptoms and signs are present:
Fast, weak pulse (110 per minute or more);
Low blood pressure (systolic less than 90 mm Hg).

Other symptoms and signs of shock include:
Pallor (especially of inner eyelid, palms or around mouth);
Sweatiness or cold clammy skin;
Rapid breathing (rate of 30 breaths per minute or more);
Anxiousness, confusion or unconsciousness;
Scanty urine output (less than 30ml per hour).

Management

IMMEDIATE MANAGEMENT
CALL FOR HELP. Urgently mobilize all available personnel
Monitor vital signs (pulse, blood pressure, respiration, temperature).
If the woman is unconscious, turn her on to her side to minimize the risk of aspiration if she vomits, and to ensure that an airway is open.
Keep the woman warm but do not overheat her, as this will increase peripheral circulation and reduce blood supply to the vital centres.
Elevate the legs to increase return of blood to the heart (if possible, raise the foot end of the bed).

SPECIFIC MANAGEMENT

Start an IV infusion (two if possible) using a large-bore (16-gauge or largest available) cannula or needle. Collect blood for estimation of haemoglobin, immediate cross-match and bedside clotting test (see below), just before infusion of fluids:

- Rapidly infuse IV fluids (normal saline or Ringer's lactate) initially at the rate of 1 L in 15-20 minutes;

Note: Avoid using plasma substitutes (e.g. dextran). There is no evidence that plasma substitutes are superior to normal saline in the resuscitation of a shocked woman, and dextran can be harmful in large doses.

- Give at least 2 L of these fluids in the first hour. This is over and above fluid replacement for ongoing losses.

Note: A more rapid rate of infusion is required in the management of shock resulting from bleeding. Aim to replace two to three times the estimated fluid loss.

Do not give fluids by mouth to a woman in shock

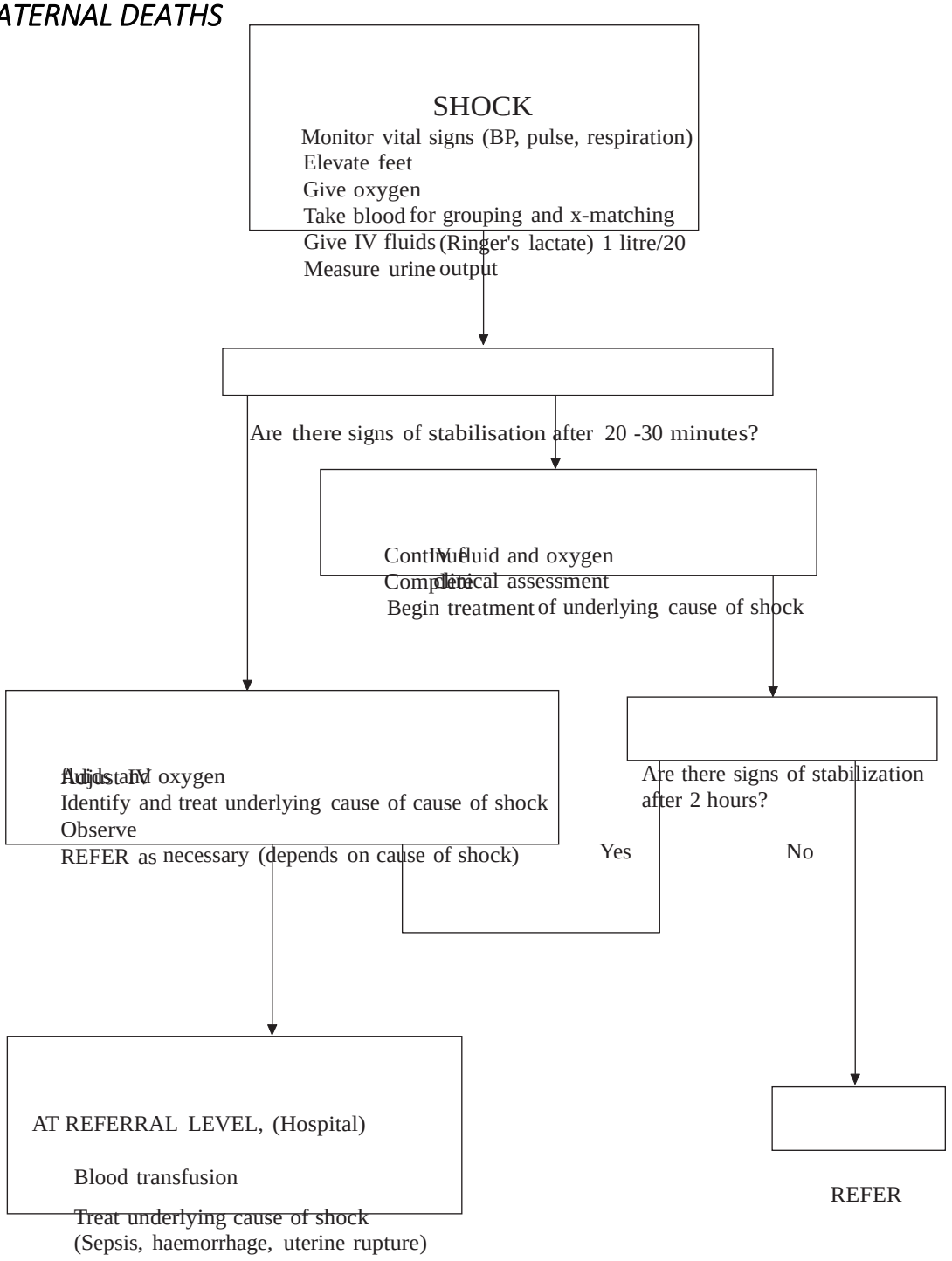
If a peripheral vein cannot be cannulated, perform a venous cut down.
Continue to monitor vital signs (every 15 minutes) and blood loss.
Catheterize the bladder and monitor fluid intake and urine output.
Give oxygen at 6-8 L per minute by mask or nasal cannulae.

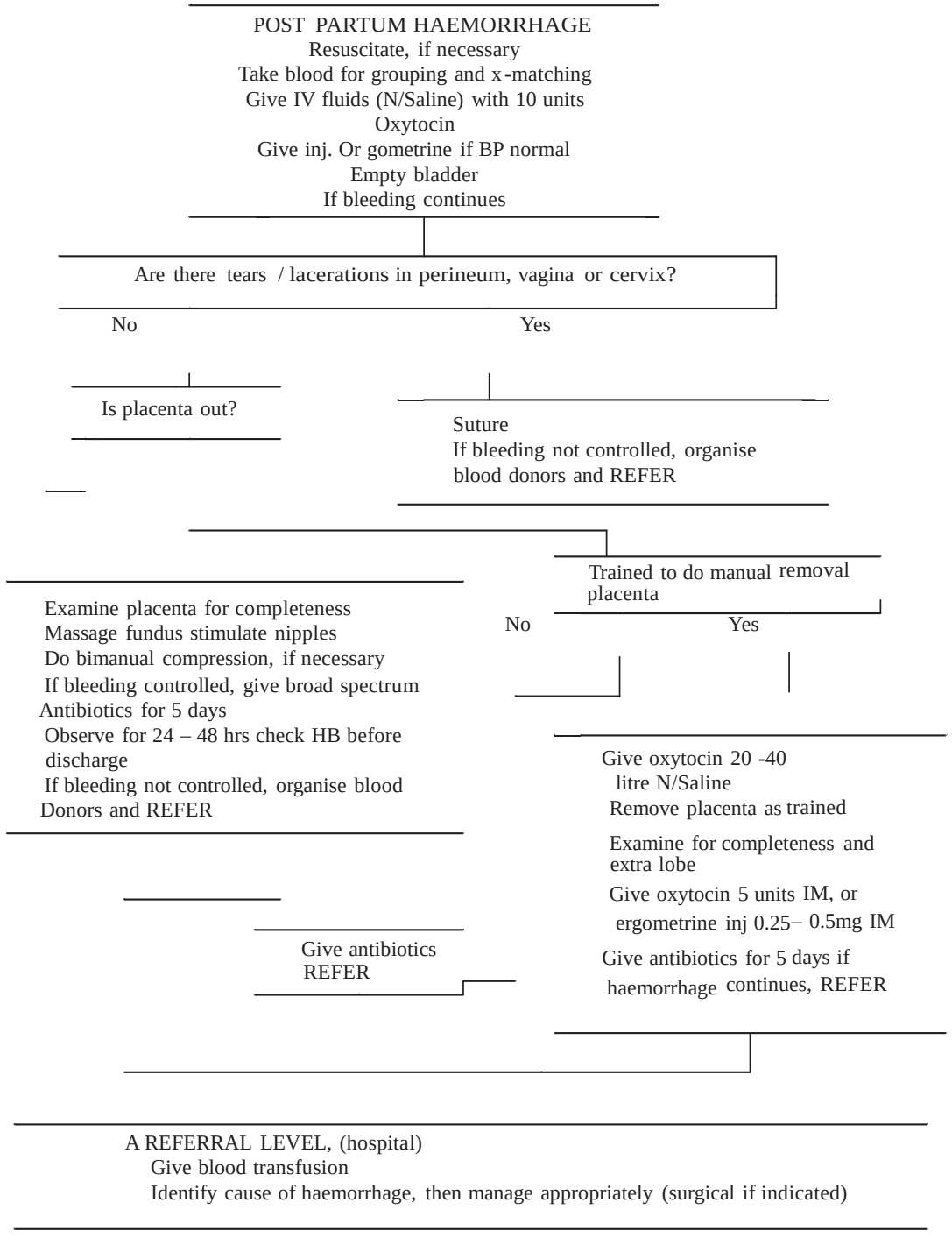
BEDSIDE CLOTTING TEST

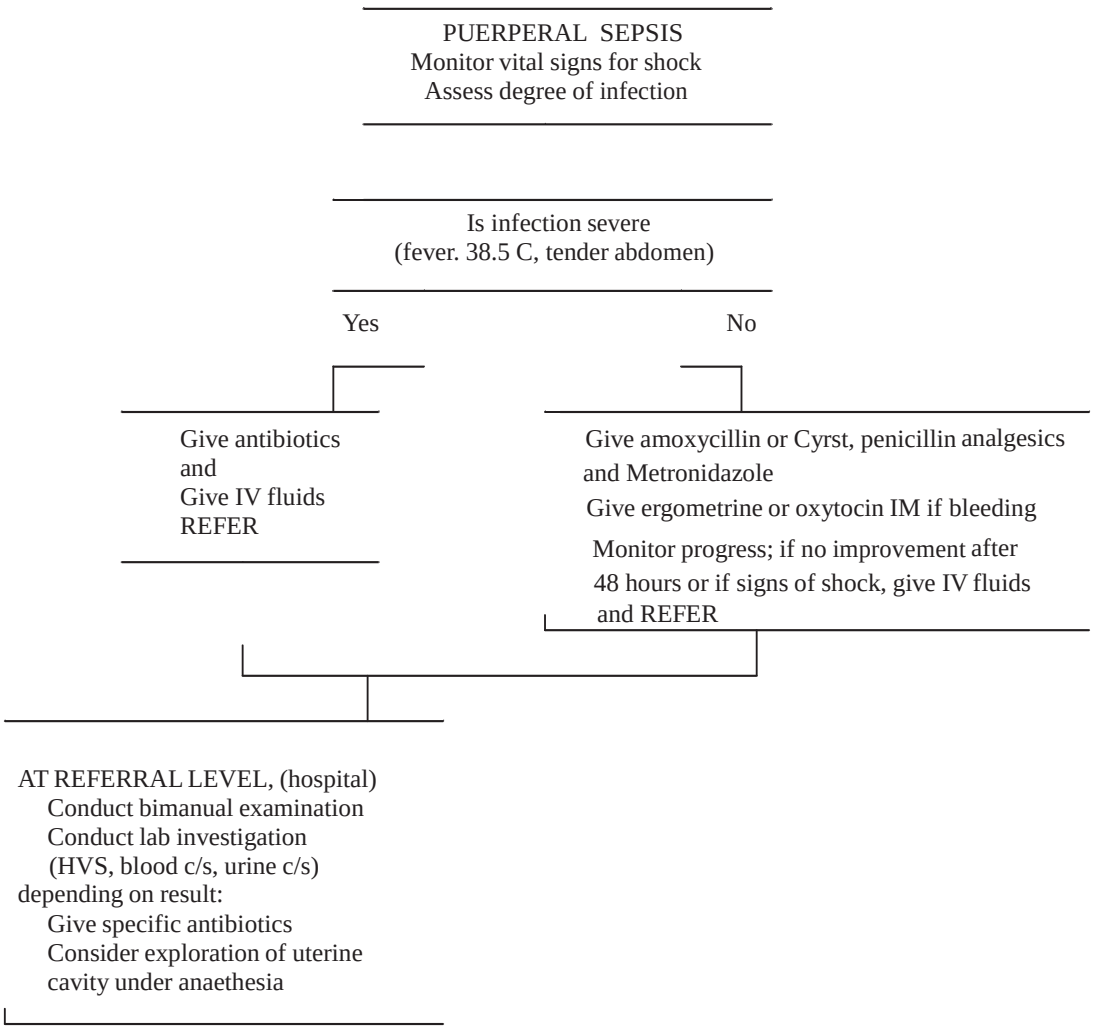
Assess clotting status using this bedside clotting test:

- Take 2 mL of venous blood into a small, dry, clean, plain glass test tube (approximately 10 mm x 75 mm);
- Hold the tube in a close fist to keep it warm (± 37 ^{o}C);
- After four minutes, tip the tube slowly to see if a clot is forming. Then tip it again every minute until the blood clots and the tube can be turned upside down;
- Failure of a clot to form after seven minutes or a soft clot that breaks down easily suggests coagulopathy.

ANNEX 2: FLOW CHARTS FOR MANAGEMENT OF MAJOR CAUSES OF MATERNAL DEATHS

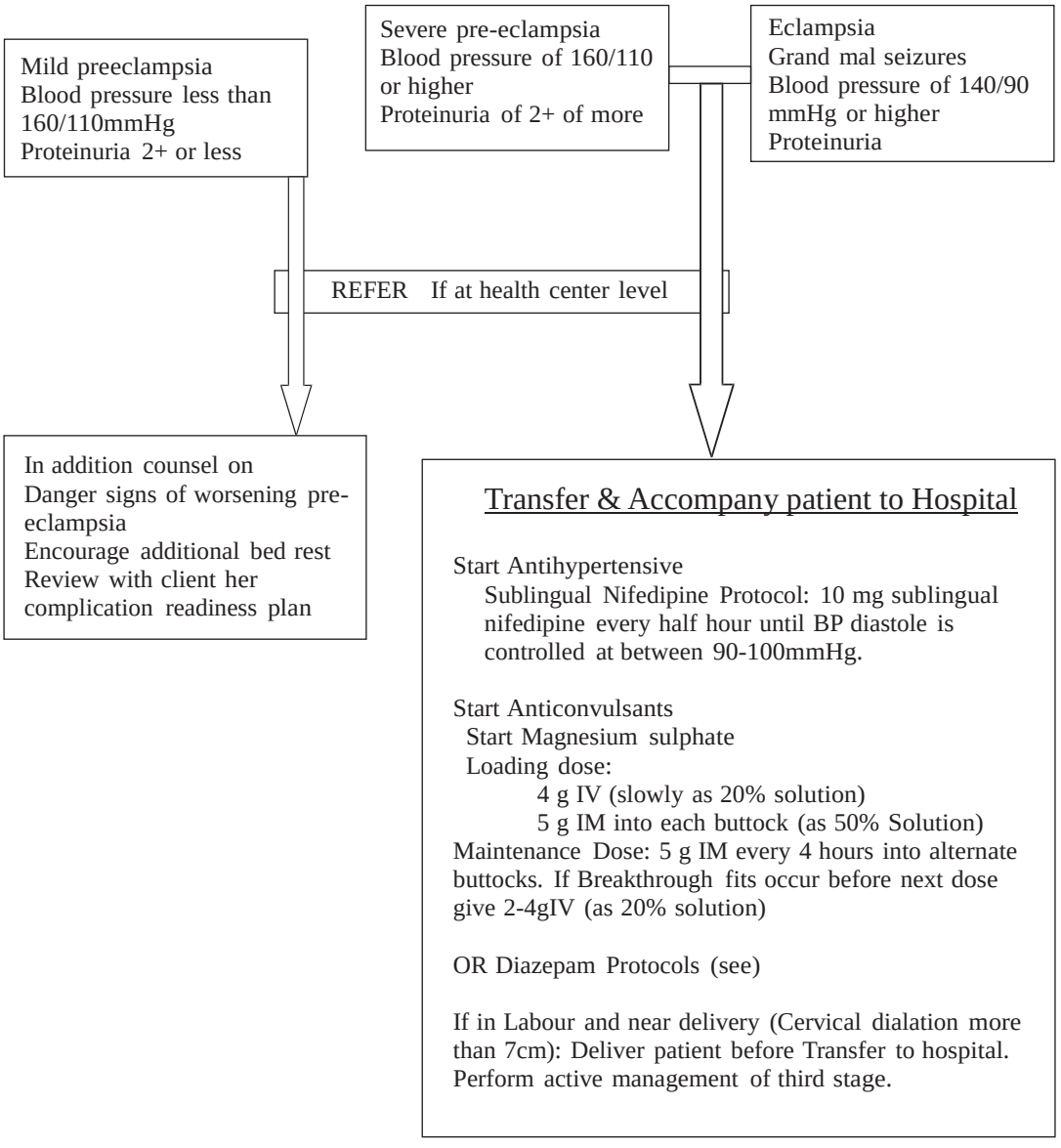



POST PARTUM HAEMORRHAGE
Resuscitate, if necessary
Take blood for grouping and x-matching
Give IV fluids (N/Saline) with 10 units Oxytocin
Give inj. Or gometrine if BP normal
Empty bladder
If bleeding continues
Are there tears / lacerations in perineum, vagina or cervix?
No
Yes
Is placenta out?
Suture
If bleeding not controlled, organise blood donors and REFER
Trained to do manual removal placenta
No
Yes
Examine placenta for completeness
Massage fundus stimulate nipples
Do bimanual compression, if necessary
If bleeding controlled, give broad spectrum Antibiotics for 5 days
Observe for 24 – 48 hrs check HB before discharge
If bleeding not controlled, organise blood Donors and REFER
Give oxytocin 20 -40 litre N/Saline
Remove placenta as trained
Examine for completeness and extra lobe
Give oxytocin 5 units IM, or ergometrine inj 0.25– 0.5mg IM
Give antibiotics for 5 days if haemorrhage continues, REFER
Give antibiotics
REFER
A REFERRAL LEVEL, (hospital)
Give blood transfusion
Identify cause of haemorrhage, then manage appropriately (surgical if indicated)


PUERPERAL SEPSIS
Monitor vital signs for shock
Assess degree of infection
Is infection severe
(fever. 38.5 C, tender abdomen)
Yes
No
Give antibiotics
and
Give IV fluids
REFER
Give amoxycillin or Cyrst, penicillin analgesics
and Metronidazole
Give ergometrine or oxytocin IM if bleeding
Monitor progress; if no improvement after
48 hours or if signs of shock, give IV fluids
and REFER
AT REFERRAL LEVEL, (hospital)
Conduct bimanual examination
Conduct lab investigation
(HVS, blood c/s, urine c/s)
depending on result:
Give specific antibiotics
Consider exploration of uterine
cavity under anaethesia

MANAGEMENT OF HYPERTENSIVE COMPLICATIONS IN PREGNANCY

Symptoms: If severe: Severe headache, blurred vision, swelling of face hands and feet, upper abdominal pain, palpitations, Siezures
Signs: Blood pressure higher than 140/90 mmHg,
Laboratory; proteinuria,



At district hospital level

Mild Pre-eclampsia

Follow up twice weekly on out patient basis if possible
Monitor BP and Urine albumin and fetal condition
Do not give anticonvulsants, antihypertensives, diuretics sedatives or tranquilizers

Admit if
Outpatient follow up is not possible
Or if worsening pre-eclampsia

Deliver if
Severe pre-eclampsia
Fetal compromise
Or if not spontaneously delivered at 40 weeks gestation. (Do not allow pregnancy to go beyond the Expected Date of Delivery)

Severe Pre-eclampsia/Eclampsia

Start/Continue Antihypertensive
Sublingual Nifedipine Protocol: 10 mg sublingual nifedipine every half hour until BP diastole is controlled at between 90-100mmHg.

Start/continue Anticonvulsants: Start Magnesium sulphate
Loading dose: 4 g IV (slowly as 20% solution)
5 g IM into each buttock (as 50% Solution)
Maintenance Dose: 5 g IM every 4 hours into alternate buttocks. If Breakthrough fits occur before next dose give 2-4gIV (as 20% solution)

OR Diazepam Protocols (see)

Monitor and document: BP every 30minutes until stable, then 2-4 hourly
Urine output hourly,
Respiration rate and fetal heart rate 4 hourly

Conduct the following laboratory test: Blood: Full blood count, Platelets, BUN, Creatinine,
Liver function Test, Urine:
Albumin

If in Labour: Monitor progress of labour and fetal well being closely with partograph. Expedite delivery if progress is unsatisfactory.

If not in labour: Plan and deliver in 48 hours if severe pre-eclampsia
Plan and deliver with 12 if eclampsia.

Assess for ideal route of delivery (See decision making tree)

Diazepam Protocol (10mg in 2ml)

IV

Loading Dose

⇒ Give 10ml IV slowly over 2 minutes
⇒ Repeat dose at 10mg if convulsions occur

Maintenance Dose

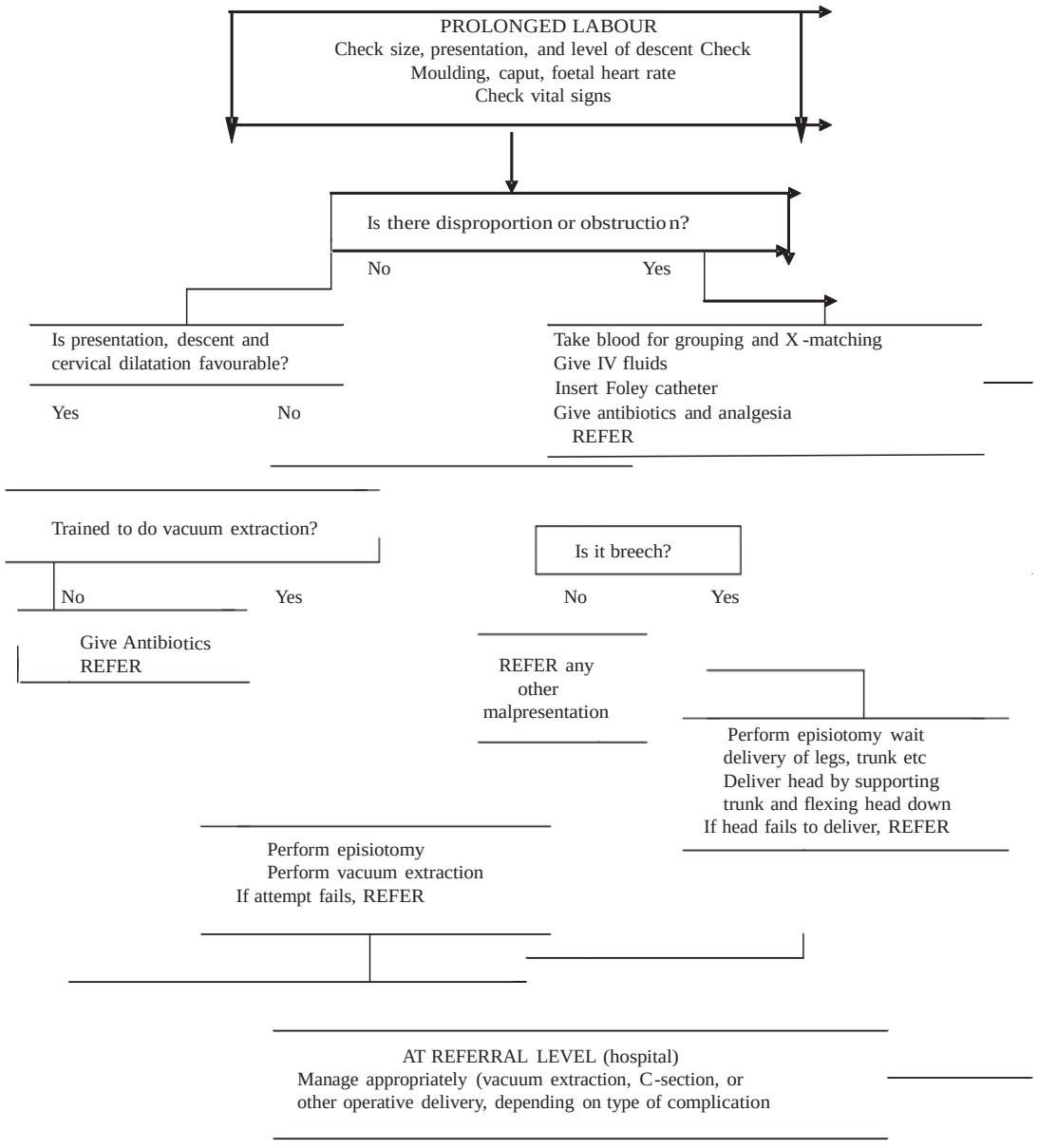
⇒ Give diazepam 40mgs in 500mls IV fluid (Normal Saline Ringers lactate) at 20 drops per minute
⇒ Stop the maintenance dose if breathing is less than 16 breaths per minute
⇒ Assist ventilation if necessary with ambu bag
⇒ Do not give more than 100mg in 24 hours
⇒ Give Diazepam rectally if indicated

Rectal Diazepam Regime

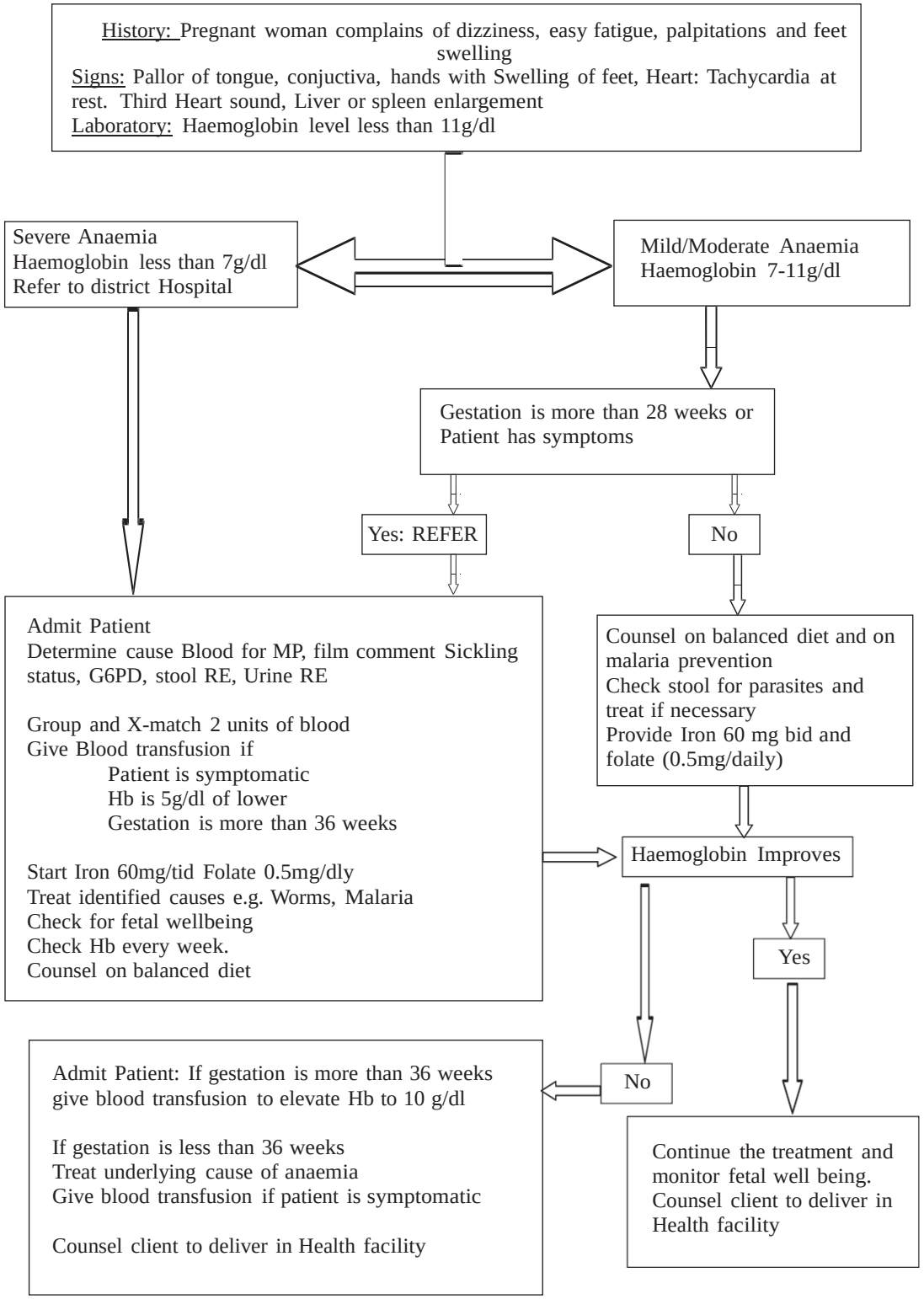
⇒ Give 20mg (4mls) in 10mls syringe
⇒ Remove needle
⇒ Lubricate the barrel
⇒ Insert the syringe into the rectum to half its length
⇒ Discharge the contents and leave the syringe in place
⇒ Hold the buttocks together for 10 minutes to prevent expulsion of the drugs

Maintenance Dose

⇒ Give 10mgs (2mls) of diazepam if convulsions occur.


PROLONGED LABOUR
Check size, presentation, and level of descent Check
Moulding, caput, foetal heart rate
Check vital signs
Is there disproportion or obstruction?
No
Yes
Is presentation, descent and cervical dilatation favourable?
Yes
No
Take blood for grouping and X-matching
Give IV fluids
Insert Foley catheter
Give antibiotics and analgesia
REFER
Trained to do vacuum extraction?
No
Yes
Give Antibiotics
REFER
Is it breech?
No
Yes
REFER any other malpresentation
Perform episiotomy wait delivery of legs, trunk etc
Deliver head by supporting trunk and flexing head down
If head fails to deliver, REFER
Perform episiotomy
Perform vacuum extraction
If attempt fails, REFER
AT REFERRAL LEVEL (hospital)
Manage appropriately (vacuum extraction, C-section, or other operative delivery, depending on type of complication

ANAEMIA IN PREGNANCY



ANNEX 3: UMBILICAL CORD INFECTION

Is an infection around the umbilical cord or the umbilicus.

- Use infection prevention steps during birth and newborn care
- Cut the cord with sterile scissors or a new razor blade
- Keep the umbilical cord uncovered, clean and dry
- Wipe the baby's body until the cord fully off and healed
- Take history

    To establish where the baby was born
    Mode of cutting the cord
    Care of the cord

- Examine the baby's abdomen and cord
    Look for moist cord
    Odour
    Fever
    Distended abdomen

- Take and record vital signs
- Give start dose of antibiotics for baby 2kg or more ampicillin 50mg/kg 1m and gentamicin 5mg kg 1m

For a baby less than 2kg

- Give ampicillin 50mg/kg 1m plus getamicin 5mg/kg 1m
- Keep cord clean and dry
- Apply gention violet for 3days

ANNEX 4: CONVERSION TABLE FOR ESTIMATING HAEMOGLOBIN

Percent Saturation	Equiv. Haemogloblin in Grams	Interpretation
100	16	No Anaemia (more than 10gm)
95	14.1	
90	13.3	
85	12.6	
80	11.8	
75	11.1	
70	10.4	
65	9.6	
60	8.9	Moderate Anaemia (between 7 and 10gm)
55	8.1	
50	7.5	
45	6.7	Severe Anaemia (less than or equal to 7gm)
40	5.9	
35	5.2	
30	4.4	
25	3.7	Very Severe Anaemia
20	3.0	
15	2.2	
10	1.5	