



MCAI | Maternal & Childhealth
Advocacy International

Improving maternal & child
healthcare worldwide

Address: 1 Columba Court, Laide,
Achnasheen, Highland,
IV22 2NL, UK
Tel/Fax: +44 (0)1445 781354
Tel: +44 (0)1445 731595
Email: office@mcai.org.uk
Website: www.mcai.org.uk

Curriculum for the Advanced Obstetric Training Programme for senior midwives to become obstetric clinicians for the Public Hospitals of Liberia

Step 1: Provisional registration of obstetric clinician candidates by MOHSW and LMDC

Step 2: Foundation program: – To be delivered in the first 3 months of the training program.

Materials provided:

- MCAI Textbook: International Maternal and Child Health Care. A practical manual for hospitals worldwide Published 2014
- MCAI Pocketbook of hospital care for maternal emergencies including major trauma and neonatal resuscitation Published 2015
- Textbook of Basic Surgical Skills, Royal College of Obstetrics and Gynaecology (RCOG) UK
- Videos of maternal and neonatal care
- Manuals on advanced obstetric and basic neonatal care (including WHO, FIGO, ALSG, MCAI)
- WHO GIEESC Surgical Care at the District Hospital 2003

Anatomy: Detailed knowledge of anatomy of the female pelvis with and without pregnancy in place and at different stages of pregnancy. Manual and books provided by MCAI.

Basic Surgical Skills: Basic techniques involved in surgery

1. Suturing and practice ++
2. Sterilisation of instruments
3. Hand-washing and proper use of gowns and gloves
4. Maintenance of theatre
1. Post-operative care

Human Physiology and Physiological Adaptations in Pregnancy

Obstetric ultrasound: Basic ultrasound to be able to recognise mal-presentations, placenta praevia, and other possible problems which may make surgery difficult.

Assessment of foundation program by Objective Structured Clinical Examination (OSCE) in Obstetric Anatomy, ultrasound and basic surgical skills conducted by Liberian trainers accompanied by international senior obstetrician.

Step 3: Advanced apprenticeship based training: – To be delivered by tutorial supplemented apprenticeship training over subsequent 15 months.

Undertaking of essential procedures under the supervision of local Liberian trainers supported by visits of MCAI's volunteer international obstetricians. Gradually progressing to be able to undertake these procedures safely as the lead surgeon (Dr. Dolo) with the local Liberian obstetricians as directly, indirectly or independently as defined below:

Definitions for the 4 categories of involvement by trainee obstetric clinicians in undertaking advanced obstetric procedures:

1. **Assistant:** Undertaking a procedure as an assistant to a senior doctor
2. **Direct supervision:** The midwife is the primary person undertaking a procedure but with a senior doctor present at all times and usually assisting the midwife
3. **Indirect supervision:** The midwife is the primary person undertaking a procedure but with a senior doctor *available for* advice or involvement locally in the facility at all times. Often the midwife would be working with and herself supervising a junior doctor (intern), a perioperative nurse, another midwife or a team of midwives.
4. **Independent:** The midwife is the primary person undertaking the procedure but with a senior doctor available for advice but possibly asleep at home or involved in other work.

Procedures

- Caesarean section
- Management of shock
- Management of eclampsia and severe pre-eclampsia
- Management of Post Partum Haemorrhage (PPH)
- Vaginal breech delivery and External Cephalic Version (ECV)
- Management of shoulder dystocia
- Salpingectomy for ruptured ectopic pregnancy
- Cervical and vaginal tear repair
- Ventouse and forceps delivery
- Manual removal of placenta
- Emergency hysterectomy
- Evacuation of products of conception, including Manual Vacuum Aspiration (MVA)
- Repair of ruptured uterus
- Replacement of inverted uterus
- Symphysiotomy
- Destructive procedures

Each procedure to be entered into a logbook (see below) kept in both paper form and electronically (Samsung Tablet)

Systems of care

Antenatal Care

Maternal Medical care for examples severe anaemia, heart failure, eclampsia, diabetes (see below)

Management of Early Pregnancy Complications

Clinical management of labour and delivery and their complications

Organisation and management of the labour ward
 Organisation and management of the operating theatre
 Postpartum management (Including post-operative care)
 Ethics and professional standards
 Laboratory and blood transfusion

Evidence Base of Advanced Training will be via the following continuous assessment materials.

- Surgical log-book,
- Case-based discussion forms,
- Supervisor Observed Experience forms
- Reflective practice forms
- Completed Supervisor Signed competence-based curriculum – 12 forms below
- Basic understanding of obstetric anaesthesia

Step 4: Final examination for registration: At the end of 18 months, direct observation of main procedures by LMDC and combination of Liberian trainers and supported by international obstetrician

If satisfactory midwife receives license to practice for 12 months and then is reviewed by a senior Liberian obstetrician and, if satisfactory, given a 5 year license to practice in Liberian Public Hospitals, as determined by the MOHSW.

Component 1: ANATOMY AND BASIC SURGICAL SKILLS

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Detailed knowledge of the anatomy of the Pelvis				
Detailed knowledge of the anatomical changes in pregnancy				
Basic Understanding of fetal and placental development and its abnormalities				
Basic understanding of the concept of teratogenesis				
Competent surgical knot tying				
Competent in the recognition and handling of common surgical instruments				
Uses correct surgical hand-washing, surgical gown and glove donning technique				
Familiar with sterilisation techniques and able to ensure appropriate instrument sterility				
Behaves in a sterility conscious manner while operating				

Component 2: OBSTETRIC ULTRASOUND

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Basic understanding of how ultrasound works				
Interpreting the ultrasound signals				
Identification of normal fetal presentation and positions				
Identification of placenta praevia				
Identification of intrauterine fetal death				
Identification of free fluid in the abdomen and pelvis				
Identification of multiple pregnancy				
Assess for retained tissue/clots				

Component 3: BASIC HUMAN PHYSIOLOGY AND PHYSIOLOGICAL ADAPTATIONS IN PREGNANCY

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Understands basic human physiology relating to the following:				
The heart and circulation				
The lungs and respiration				
The Kidneys				
The Endocrine system				
The Reproductive system				
Gastrointestinal system				
Understands the physiological changes that occur in pregnancy				

Component 4: ANTENATAL CARE

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
ANTE-NATAL CLINIC SKILLS:				
Conduct a first visit				
Conduct follow up visits and decide an appropriate visit schedule				
Arrange appropriate routine investigations				
Arrange appropriate routine pregnancy preventative measures				
Perform pre-test counselling for HIV testing				
Arrange appropriate management of HIV positive patients				
BASIC OBSTETRIC ULTRASOUND ASSESSMENT:				
U/S dating of pregnancy using the appropriate measurement for gestation				
3 rd trimester assessment of viability				
3 rd trimester assessment of presentation				
3 rd trimester assessment of AFI				
3 rd trimester assessment of placental position				
MANAGE THE FOLLOWING ANTENATAL COMPLICATIONS:				
Previous Caesarian Section				
Suspected Breech presentation >35/40				
Suspected Multiple gestation				

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
ANTENATAL COMPLICATIONS MANAGEMENT – CONTINUED:				
Suspected Mal-presentation				
Prolonged Pregnancy				
Suspected Poly-/Oligo-hydramnios				
Suspected premature rupture of membranes				
Antepartum haemorrhage				
Suspected Fetal Death				
Severe anaemia				
Suspected alcohol/drug Abuse				
Suspected domestic violence				
MANAGE THE FOLLOWING INFECTIONS IN PREGNANCY:				
Malaria				
Syphilis				
Tuberculosis				
Intestinal Helminth infection				
Varicella Zoster infection				
HIV				
Delivery Planning:				
Discuss and plan appropriate place and timing of delivery				
Discuss Post-delivery family planning				

Component 5: MATERNAL MEDICINE

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
DIAGNOSE, INVESTIGATE AND MANAGE:				
Chronic Hypertension				
Pre-eclampsia				
Eclampsia				
Pre-eclampsia with pulmonary oedema				
Pre-eclampsia with oliguria				
Severe Malaria in pregnancy				
Sickle cell Disease in pregnancy				
Anaphylaxis in Pregnancy				
Reflex Oesophagitis				
Gestational Diabetes				
Diabetic Ketoacidosis				
Heart failure in pregnancy				
Urinary Tract Infection and Pyelonephritis				
Severe Dehydration and Viral/Bacterial Gastroenteritis				
Lower Respiratory Tract Infection in pregnancy				
Asthma in Pregnancy				
Shock during Pregnancy				
Maternal Collapse				

Component 6: MANAGEMENT OF EARLY PREGNANCY COMPLICATIONS

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
ULTRASOUND ASSESSMENT IN THE 1ST TRIMESTER:				
Number of fetuses				
Viability				
Measurement of CRL				
Confirm inter-uterine site of pregnancy				
Assess for haemo-peritoneum				
Assess for retained tissue/clots				
MANAGEMENT OF ABORTION/MISCARRIAGE				
Confirm diagnosis				
Determine if induced/spontaneous in sensitive, confidential and discreet manner				
Assess for evidence of infection, perforation, foreign body or poisoning				
Surgical management of uncomplicated 1 st trimester miscarriage including pelvic inflammatory disease prophylaxis				
Liaise appropriately with medical team				
MANAGEMENT OF SUSPECTED ECTOPIC PREGNANCY				
Suspect diagnosis appropriately on basis of clinical and ultrasound findings				
Manage initial resuscitation and liaise appropriately with surgical team				
Perform open salpingectomy for ectopic pregnancy				
MANAGEMENT OF TROPHOBLASTIC DISEASE				

Suspect diagnosis and liaise with team regarding management				
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Component 7: CLINICAL MANAGEMENT OF LABOUR AND DELIVERY AND ITS COMPLICATIONS

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
MANAGE LABOUR DELAY				
Supervise the diagnosis of labour onset and the initiation of appropriate monitoring				
Use the partogram effectively and supervise its use for labour monitoring				
Recognise delay in the latent phase of labour, assess for cause and manage				
Recognise delay in the 1 st stage of labour, assess for cause and manage				
Recognise delay in the 2 nd stage, assess for cause and manage				
Make appropriate decision to induce labour and supervise process				
Make appropriate decision to augment labour and supervise process				
FETAL MONITORING				
Can initiate and supervise appropriate fetal monitoring in each stage of labour				
Can interpret fetal monitoring in each stage of labour				
Can undertake remedial measures if suspected fetal distress				
Can make an appropriate decision for operative intervention for fetal distress				

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
MANAGEMENT OF OTHER OBSTETRIC COMPLICATIONS IN LABOUR				
Cord prolapse				
Preterm labour and delivery				
Antepartum haemorrhage				
Breech presentation				
Transverse lie				
Multiple gestation				
Prolonged and preterm rupture of membranes				
Previous Uterine incision/rupture				
Fetal death				
Uterine rupture				
Intrauterine infection				
LABOUR WARD CLINICAL MANAGEMENT SKILLS				
Conduct regular labour ward rounds				
Ensure hand-over meetings are undertaken at each staff change				
Prioritise labour ward problems				
Liaise with labour ward staff and supervise appropriately				
Demonstrate effective leadership in acute emergencies				

Component 8: CLINICAL MANAGEMENT OF DELIVERY AND ITS COMPLICATIONS

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Conduct a normal delivery				
Ventouse extraction and use of lift-out forceps				
Vaginal Breech delivery				
Vaginal delivery of twins				
Face Presentation				
Cord prolapse in second stage				
Shoulder dystocia				
Uterine Inversion				
Appropriate use of Episiotomy				
Repair of Episiotomy and 1 st /2 nd degree tears				
Repair of Cervical tears and manual assessment of uterus for haemorrhage				
Manual removal of retained placenta				
Appropriate prophylaxis for post-partum haemorrhage				
Primary post-partum haemorrhage				
Uncomplicated Caesarean Section				
Repeat Caesarean Section				
Caesarean section at full dilatation				
Caesarean section for placenta praevia				

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Caesarean section <34/40				
Surgical management of Uterine Rupture				
Caesarean section for transverse/oblique lie				
Resuscitation of the neonate				
Takes consent for operative procedures – verbal/written as appropriate				
Documents delivery events and surgical procedures				

Component 9: ORGANISATIONAL MANAGEMENT OF THE LABOUR WARD AND OPERATING THEATRE

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
COMMUNICATION AND LEADERSHIP				
Communicates well with labour ward staff				
Able to lead and supervise labour ward team in routine labour ward tasks				
Able to lead labour ward team in the management of acute emergencies				
Able to liaise appropriately with the medical team in the hospital				
ORGANISATION				
Implements/oversees a system of stock-checking for essential drugs				
Implements/oversees a system of stock-checking for essential equipment				
Ensures that essential medicines and equipment are readily available				
Communicates deficits in equipment/drug supplies to hospital's management				
Implements/Oversees and ensures the availability of 'acute emergency packs'				
Implements/Oversees and ensures that a resuscitation pack is fully equipped				
Oversees a system for checking the new-born resuscitation area				
Ensures that pre-printed 'proformas' and 'Chart's are available (e.g. Partographs)				
Oversees infection control procedures e.g. use of sharps bins and sterilisation				

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
ORGANISATION- CONT'D				
Oversees (directly/indirectly) appropriate cleaning of the labour ward department				
Keeps register of controlled drug use				
Ensure emergency contact details for operating theatre and anaesthetic staff are available				
TEACHING AND QUALITY IMPROVEMENT				
Oversees and takes part in regular staff hand-over of patient care				
Implements and oversees monitoring for the correct use of the partogram				
Implements and oversees monitoring of the quality of medical records				
Takes part in the root cause analysis of maternal deaths within the department				
Implements and oversees monthly maternal morbidity and mortality meeting				
Involved in the development and implementation of maternity guidelines				
Involved in the dissemination and teaching of maternity guidelines				
Takes part and helps organise clinical educational meetings				
Organises and runs regular educational emergency drills				
Takes part in the education of midwifery, nursing and junior medical staff				
Implements and monitors a blood transfusion policy				

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
OPERATING THEATRE				
Communicates well with operating theatre team				
Monitors the availability of essential surgical equipment				
Monitors the availability of essential medicines				
Ensure WHO checklist is completed for every patient				
Ensure aseptic technique is adhered to by all staff				

Component 10: POST-PARTUM MANAGEMENT (INCLUDING POST-OPERATIVE CARE)

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
RECOGNISE AND MANAGE THE FOLLOWING POST-PARTUM PROBLEMS				
Secondary post-partum haemorrhage				
Bladder dysfunction				
Obstetric fistula				
Mastitis				
Puerperal depressive illness and psychosis				
Puerperal sepsis				
Anaesthetic complications				
Anaemia				
Perineal infection				
Thrombo-embolic disease				
ABLE TO COUNSEL AND ADVISE ON THE FOLLOWING:				
Post partum family planning				
Post partum Tubal ligation				
Breast-feeding				
Neonatal and Infant health and vaccination programs				
Events of delivery/surgery				
Future pregnancy and delivery management				

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
MONITOR AND MANAGE THE FOLLOWING POST-OPERATIVE AREAS				
Fluid balance and nutrition				
Catheter care and urinary output				
Monitoring				
Wound care				
Post-operative Infection				
Analgesia				

Component 11: ETHICS AND PROFESSIONAL STANDARDS

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Communicates politely and honestly with patients and staff				
Takes appropriate consent				
Reflects on personnel management and potential areas of improvement				
Attends and successfully completes MCAI/ALSG's 2 day medical ethics course				

Component 12: LABORATORY AND BLOOD TRANSFUSION

SKILL	DIRECT SUPERVISION		INDEPENDENT PRACTICE	
	DATE	Trainer's Signature	DATE	Trainer's Signature
Monitor the availability of essential diagnostic tests				
Documents and communicates stock deficits in essential tests to management				
Monitor the availability of essential blood transfusion kit and tests				
Documents and communicates stock deficits in essential transfusion equipment				
Monitors the availability of blood on a daily basis				
Advocates for blood donation amongst relatives, visitors and staff				

CASE-BASED DISCUSSION (CBD)

MIDWIFES NAME:

ASSESSORS NAME:

**CLINICAL PROBLEM
ENCOUNTERED:**

**SUMMARY OF CASE
DISCUSSED:**

**SUMMARY OF
TEACHING POINTS:**

ASSESSMENT OF MIDWIFE'S KNOWLEDGE/MANAGEMENT OF DISCUSSED CASE:

MEETS OR EXCEEDS EXPECTATION:

BELOW EXPECTATIONS:

ASSESSOR'S

RECOMMENDATION:

**MIDWIFE'S
SIGNATURE:**

**ASSESSOR'S
SIGNATURE:**

REFLECTIVE PRACTICE (RP)

MIDWIFE'S NAME:

ASSESSOR'S NAME:

SUMMARY OF CASE:

HOW I WOULD MANAGE THE CASE DIFFERENTLY IN THE FUTURE:

(E.g. OVER-WORK, DEFICIENCY IN KNOWLEDGE):

MAIN LEARNING POINTS AND ACTIONS REQUIRED e.g. book-learning (IF APPLICABLE):

MIDWIFE'S

SIGNATURE:

ASSESSOR'S

SIGNATURE:

SUPERVISOR-OBSERVED EXPERIENCE (SOE)

MIDWIFE'S NAME:

ASSESSOR'S NAME:

CLINICAL PROBLEM ENCOUNTERED:

SUMMARY OF CASE OBSERVED:

SUMMARY OF KEY MANAGEMENT POINTS:

ASSESSMENT OF MIDWIFE'S CLINICAL ACUMENT IN MANAGING OBSERVED CASE:

MEETS OR EXCEEDS EXPECTATION:

☐

BELOW EXPECTATIONS:

☐

ASSESSOR'S RECOMMENDATION:

MIDWIFE'S SIGNATURE:

ASSESSOR'S SIGNATURE:

DATA ENTRY FORM

LOG BOOK FOR ADVANCED EMERGENCY OBSTETRICS BY MIDWIVES		
Midwife's Full Name: <input type="text"/>	Supervisor's Full Name: <input type="text"/>	Date of Procedure (DD/MM/YYYY): <input type="text"/>
Patient's Full Name: <input type="text"/>	Patient's Date of Birth (DD/MM/YYYY): <input type="text"/>	Hospital: <input type="text"/>
Patient Status and Intervention Required		
Reason for Intervention: <input type="text"/> Intervention: <input type="text"/> Removal of fallopian tube for ruptured ectopic pregnancy Describe intervention, including any procedures and drugs used: <input type="text"/>		Patient's Signs at Time of Intervention Pulse Rate: <input type="text"/> BPM Respiratory Rate: <input type="text"/> Breaths per minute Blood Pressure (BP): <input type="text"/> mmHg Temperature: <input type="text"/> °C Was Shock Present? <input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> UNSURE
How Did the Procedure Go?		
Duration of Procedure: <input type="text"/> mins Any Post-Op Infection? <input type="radio"/> YES <input type="radio"/> NO Describe any post-op infection that occurred: <input type="text"/>	Was anaesthetic given? <input type="radio"/> YES <input type="radio"/> NO If YES, what anaesthetic? <input type="text"/> Describe any anaesthetic complications: <input type="text"/>	What, if any, complications in first 4 hrs? <input type="text"/> What, if any, complications in >4 hours? <input type="text"/> Was a transfusion needed and/or available? <input type="text"/>
Any unexpected obstetric intervention problems? <input type="radio"/> YES <input type="radio"/> NO Any equipment problems? <input type="radio"/> YES <input type="radio"/> NO Describe any problems that occurred: <input type="text"/>	About the Baby Was baby alive if delivered? <input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> N/A If baby was delivered, was it breathing normally or gasping? <input type="radio"/> Normally <input type="radio"/> Gasping <input type="radio"/> N/A Was its heart rate >100 or <100? <input type="radio"/> <100 <input type="radio"/> >100 <input type="radio"/> N/A Was neonatal resuscitation needed? <input type="radio"/> YES <input type="radio"/> NO If baby was resuscitated, what was done? <input type="checkbox"/> Bag and Mask <input type="checkbox"/> Drugs <input type="checkbox"/> Chest Compressions <input type="checkbox"/> Other (please specify below) Other comments on Resuscitation: <input type="text"/>	
Did mother survive the intervention? <input type="radio"/> YES <input type="radio"/> NO Did baby survive the intervention? <input type="radio"/> YES <input type="radio"/> NO	Midwife's signature: <input type="text"/> Supervisor's signature: <input type="text"/> Any other comments? <input type="text"/>	

Includes:

Drop-down list for Intervention (also includes “other, please specify below” option):

Midwife's Full Name:	<input type="text"/>	Supervisor's Full Name:	<input type="text"/>	Date of Procedure (DD/MM/YYYY):	<input type="text"/>
Patient's Full Name:	<input type="text"/>	Patient's Date of Birth (DD/MM/YYYY):	<input type="text"/>	Hospital:	<input type="text"/>

Patient Status and Intervention Required

Reason for intervention:

Intervention: <input type="text" value="Removal of fallopian tube for ruptured ectopic pregnancy"/> Describe intervention: <div style="border: 1px solid #ccc; height: 60px; width: 100%;"></div>	Patient's Signs at Time of Intervention Pulse Rate: <input type="text"/> BPM Respiratory Rate: <input type="text"/> Breaths per minute Blood Pressure (BP): <input type="text"/> mmHg Temperature: <input type="text"/> °C Was Shock Present? <input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> UNSURE
	<div style="border: 1px solid #ccc; padding: 5px;"> Management of prolapsed umbilical cord Management of ruptured uterus Manual removal of placenta Manual vacuum aspiration for incomplete miscarriage: MVA Neonatal resuscitation involving bag and mask or cardiac ... Removal of fallopian tube for ruptured ectopic pregnancy Repair of perineal tear Repair of 3rd degree perineal tear </div>

How Did the Procedure Go?

Duration of Procedure: mins Was anaesthetic given? ☐ YES

What, if any, complications in first 4 hrs?