



**MCAI** | Maternal & Childhealth  
Advocacy International

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healthcare worldwide

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**11<sup>th</sup> December 2016**

## **Job description and curriculum for trainees in hospital-based advanced neonatal care in Liberia**

**Job Title:** Trainee Advanced Neonatal Care Practitioner

### **Job Description**

#### **Introduction**

This position provides an opportunity for nurses, midwives and physician assistants interested in and passionate about the hospital care of the newborn infant to gain the knowledge and skills required to deliver high quality care for this highly vulnerable group of patients.

This role compliments the work of the obstetric clinicians and has been created by a partnership between the Liberian Ministry of Health (MOH), WHO Liberia, UNFPA Liberia and MCAI Liberia to address the shortage of trained providers of neonatal care in public hospitals throughout Liberia.

It is envisioned that once trained, the “advanced neonatal care practitioners” will be able to work alongside and in a team with doctors and obstetric clinicians to facilitate the delivery of good quality neonatal care in hospitals where the number of traditionally trained medical personnel is much lower than that required to deliver quality healthcare. Successful Advanced Neonatal Care Practitioners would be particularly valuable in rural district hospitals where there are currently very few trained health professionals able to care for the newborn.

#### **Programme Plan**

This is a new programme of training and will begin with 4 trainees, expanding within the next 6 months to a total of 9 trainees.

The first 4 trainees will be chosen from applicants from CB Dunbar Hospital, Phebe Hospital and Martha Tubman Memorial Hospital in Grand Jedeh. These first 4 trainees will receive their education in CB Dunbar Maternity Hospital.

The next group of 5 trainees will be selected from Redemption and CH Rennie Hospitals and receive their training in Redemption Hospital.

The training hospitals (CB Dunbar and Redemption) will be upgraded by the Partnership to ensure that these facilities have the necessary equipment, drugs and medical supplies required to ensure appropriate and effective neonatal care (for example neonatal resuscitation platforms, phototherapy units, skin to skin wraps etc.).

### **Training**

Training will last for a total of 2 years.

The first year will follow the curriculum (attached) where apprenticeship-based learning will be undertaken on the neonatal and post-natal wards with teaching by volunteer international experts in advanced neonatal hospital care (doctors and advanced neonatal nurse practitioners) as national experts are unavailable. There will also be weekly classroom based training during this first year of training, with regular assessments, such as objective structured clinical examinations (OSCEs).

The second year will be undertaken by trainees as pre-licensed interns in hospitals other than the training centre selected by the MOH.

During both years, trainees will be required to demonstrate learning via continuous assessment and formal examinations.

At the end of the internship, each trainee will undergo a final assessment by the Liberian Medical and Dental Council (LMDC). Successful results achieved during this examination will lead to trainees being licensed by the LMDC to practice hospital neonatal care in public hospitals in Liberia. Private practice will not be permitted and there will be a need to complete a 5-year period of work in hospitals designated by the MOH after licensing has been granted.

Currently efforts are being made to develop a BSc degree course in hospital neonatal care for those candidates entering this new programme.

Trainees will be provided with the necessary materials to document and assist with their training including a laptop computer containing a constantly updated E Library on hospital neonatal care in low resource settings, the curriculum and database for all procedures undertaken. They will also be given the MCAI textbook and MCAI neonatal pocketbook and other essential materials to ensure they are able to practice safe neonatal care (including a decent paediatric stethoscope, a torch, a nursing fob-watch, a neonatal bag and mask resuscitator, a blood glucose measurement device).

### **HR details**

The Ministry of Health will be responsible for standard basic remuneration, which will be supplemented by an incentive of 150 USD per month by MCAI.

Trainees will be entitled to the standard leave allowance for their grade. If more than 2 days, leave must be requested 4 weeks in advance and cannot coincide with the leave of any other trainee. Leave may not be taken in the 1st 6 weeks or the last 4 weeks of the first year of the training program.

## **Duties and responsibilities**

It should be noted that the list below is not exhaustive, and a flexible approach is expected, such that all reasonable activities essential for the provision of safe and effective neonatal care services in the training hospitals will be undertaken.

In addition to undertaking the training outlined in the attached curriculum including skills drills, tutorials and case presentations, the first 4 trainees at CB Dunbar Hospital must provide emergency care to all newborn infants who need it 24 hours a day 7 days a week on a rota basis. Trainees must form an on-call rota to ensure 24/7 provision of care. It is likely that this will consist of a 1 in 3 or 1 in 4 rota where the trainees will be expected to complete a 24 hour on-call every 3 to 4 days. An on-site on-call room is available for this purpose. The following 24-hour period is then allowed as a full day off except in exceptional circumstances.

Trainees will hold a ward round with their trainer every morning in the neonatal and postnatal wards to discuss clinical management of each newborn baby.

Trainees will also be responsible for liaising with maternity care staff to ensure that before discharge home, ALL newborn infants are breast feeding well and that their mothers are given advice and materials concerning the recognition of warning signs (particularly concerning the recognition of neonatal sepsis and management of feeding problems).

An outpatient clinic at the hospital will be organised and run by trainees once a month (in the first instance) for babies who may require special longer term attention.

Participation in guideline development, audit and other risk management activities that form a component of the training program will be required

## **Job Specification**

*Minimum requirements for applicants are as follows:*

1. Successful completion of a qualification in nursing or midwifery
2. A Liberian citizen with full registration to practice by the Liberian Board of Nursing and Midwifery
3. Willingness to fulfil the roles and responsibilities outlined in the job description
4. Some academic ability and a willingness to study during their own time
5. Ability to work and participate as a member of a multi-disciplinary team
6. A polite and respectful attitude and a caring, ethical, and professional manner towards patients (mothers and their babies)
7. A willingness to work the "on-call" rota
8. A willingness to work after training in public hospitals identified by the Ministry of Health

*Desirable characteristics for applicants:*

1. Recognised by their managers and departmental heads to practice exceptionally well in their nursing/midwifery duties and thought likely to be able to learn the additional duties and responsibilities required of an advanced neonatal care practitioner

2. Experience of some practical neonatal procedures
3. A demonstrable desire to train to contribute to the provision of comprehensive emergency obstetric and neonatal care
4. A demonstrable desire to develop and improve neonatal care in Liberia with a view to improving Liberian neonatal health outcomes
5. Previous experience of working in district health facilities and a willingness to return to these facilities after training

### **Assessments and interview for applicants**

Candidates are invited to provide their curriculum vitae together with a written statement of up to 500 words supporting their application.

Applications should be accompanied by a supportive letter from the current or most recent head of department.

Applications should be e-mailed to the following e-mail address ([director@mcai.org.uk](mailto:director@mcai.org.uk)), or a hard copy delivered to CB Dunbar Hospital for the attention of Dr. Obed Dolo.

Based on the applications provided, candidates will be shortlisted for an interview. Further details of the interview process will be given at that time but will include a short written assessment in addition to a 30 minute interview conducted by representatives of the Partnership.

Application Deadline: 3<sup>rd</sup> January 2017

Interviews will be held during the 10 days beginning 5<sup>th</sup> January 2017 and will be held at UNFPA or WHO offices in Monrovia. You will be notified of the time and date as soon as possible after 3<sup>rd</sup> January 2017.

For more information please contact Dr. Obed Dolo, Medical Director at CB Dunbar Hospital or write to Professor David Southall at email: [director@mcai.org.uk](mailto:director@mcai.org.uk)



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## Curriculum for the advanced neonatal practitioner training course

### Components:

Apprenticeship based training will be undertaken by volunteer international paediatricians and neonatal nurse practitioners from MCAI and the Advanced Life Support Group (ALSG).

Every procedure undertaken by each trainee will be documented in a **paper log book** and also onto a **database** held in an Android tablet computer.

Case-based discussion forms and Supervisor observed experience forms will also be undertaken (see below).

Each month the logistician attached to the programme will download the electronic data base from each trainee and email it to the programme lead in the UK as a excel spread sheet. The paper logbooks will also be copied and sent to the UK so that they can be checked against the electronic logbooks.

Every trainee will also have a copy of the new MCAI textbook and neonatal and infant pocket book (see <http://www.mcai.org.uk/pdf-downloads-for-textbook--pocket-book> for details).

Every 6 weeks there will be a 2-hour meeting where the clinical audit of selected newborn infants who have died or nearly died will be attended by the trainees and supervised by the international trainer.

Because the training is apprenticeship-based, all medical problems encountered will be managed as they occur and the monthly curriculum below is to show that during each particular month there will be an emphasis on consolidating background knowledge on that particular subject. Every candidate will have the curriculum and knowledge base to support each subject from the outset in both the reference textbook and for immediate use in their pocketbook.

At some stage, two MCAI/ALSG's 3-day neonatal emergency care course involving all trainees and 42 other nurses and midwives caring for newborn infants from all 4 hospitals involved (CB Dunbar, Phebe, CH Rennie and Redemption), will be held at the Phebe

## Monthly components of the training programme

### Month 1 Resuscitation of the newborn infant: basic and advanced.

- a. Assessment and recognition of need for resuscitation
- b. ABC approach
- c. Airway opening
- d. Use of bag valve mask
- e. Management of meconium aspiration
- f. Chest compressions
- g. Drugs
- h. Endotracheal intubation
- i. When to stop resuscitation
- j. Talking to parents about what has happened

### Month 2 Basic care of the full-term, pre-term and low birth weight infant including organisation and management of the neonatal ward

- a. In pregnancy, minimizing surfactant deficiency using corticosteroids and preventing neonatal sepsis by appropriate antibiotics to the mother
- b. Organising the neonatal unit (including cleaning and care of equipment and ward, staff hygiene, duty rotas, observation charts, notes and record keeping etc.)
- c. Temperature control: keeping the baby warm including Skin to skin (Kangaroo Mother Care: KMC) Treating hypothermia
- d. Managing the placenta, cord and umbilical stump
- e. Vitamin K
- f. Assessing prematurity and measuring birth weight
- g. Feeding the newborn: breast feeding (including researching the possibility of setting up a safe breast milk bank with pasteurization/freezing/storing facilities near the new neonatal unit) and nasogastric feeding
- h. Managing feeding difficulties
- i. Fluid and electrolyte management in infants needing IV fluids
- j. Monitoring for and prevention of hypoglycaemia
- k. Monitoring oxygenation and safely giving oxygen when needed
- l. Prevention of hospital acquired infection
- m. Caring for infants and vulnerable mothers: diabetes, drug dependence and those with mental health problems
- n. Discharge plans including nutritional supplements when required

### Month 3 Basic practical procedures needed for caring for ill newborn infants.

- o. Placing of gastric tubes
- p. How to measure temperature reliably?
- q. How to obtain urine samples and research possibility of undertaking ward-based urine microscopy
- r. How to obtain blood samples safely, especially heel capillary blood.
- s. Detection and management of hypoxaemia: pulse oximetry and safe administration of oxygen (see k. above, teach together)
  
- t. Detection and management of hypoglycaemia (see i. above, teach together)
- u. Safety in administering drugs, fluids and electrolytes
- v. Measuring blood glucose (see c. above, in this section)
- w. Giving injections (IM, IV and SC)

- x. Placing IV cannulae (peripheral venous, scalp vein and external jugular) and care of IV lines and cannulae
- y. Lumbar puncture
- z. Umbilical venous cannulation for exchange transfusion and in an emergency for resuscitation in the first 3 days of life.
- aa. Nasal CPAP treatment

#### **Month 4 Detection and management of neonatal sepsis**

- a. Neonatal sepsis: recognition, treatment (antibiotics, nutrition and fluid management including prevention and treatment of hypoglycaemia)
- b. Life threatening infection: meningitis and septicaemia
- c. Laboratory evaluation
- d. Pneumonia
- e. Skin infection
- f. Eye infections
- g. Umbilical infection
- h. Mucous membrane infections
- i. Necrotising Entero-Colitis (NEC)
- j. Knowledge of the neonatal use of antibiotics

#### **Month 5 Detection and management of neonatal respiratory failure**

- a. Neonatal respiratory failure: recognition, causes, treatment (antibiotics, oxygen, early nasal CPAP, nutrition and fluid management)
- b. Treatment of pneumothorax: needle thoracocentesis and chest drain insertion
- c. Tracheal intubation and assisted ventilation
- d. Apnoeic/hypoxaemic episodes causes, treatments, oxygen, nasal CPAP and caffeine

#### **Month 6 Management of anaemia, jaundice, haemorrhage, shock, heart failure and polycythaemia**

- a. Neonatal jaundice causes and management including collecting of blood samples, measurement of bilirubin and other laboratory tests for the causes of jaundice. Treatment with phototherapy and exchange transfusion
- b. Diagnosis and management of anaemia and haemorrhage
- c. Recognition and management of shock (including intraosseous needle insertion)
- d. Recognition and management of heart failure
- e. Recognition and management of polycythaemia (including hydration and partial exchange transfusion)

#### **Month 7 Management of neurological disorders**

- a. Identifying the causes of fits and reduced conscious level
- b. Metabolic causes including hypoglycaemia, hypocalcaemia and hyponatraemia
- c. Diagnosis and management of hypoglycaemia and its different causes
- d. Managing fits with glucose and anticonvulsants when indicated
- e. Neonatal tetanus: management
- f. Hypoxic ischaemic brain injury; diagnosis and management
- g. Other causes such as drug dependence, toxic substances from traditional healers, meningitis and congenital brain abnormalities

#### **Month 8 Recognition and management of congenital abnormalities**

- a. Congenital heart disorders
- b. Management of serious brain disorders including hydrocephalus and spina bifida
- c. Management of chromosome disorders such as Down's syndrome
- d. Gastrointestinal disorders such as oesophageal atresia, pyloric stenosis, duodenal stenosis, diaphragmatic hernia, volvulus, intussusception, peritonitis and Hirschsprung's disease
- e. Renal disorders
- f. Genital problems

### **Month 9 Recognition, prevention and management of infections that can affect the newborn infant**

- a. HIV and PTMCT
- b. Syphilis
- c. Varicella zoster
- d. Dehydration and gastroenteritis
- e. Bronchiolitis
- f. TB

### **Month 9 Ethical and professional standards when caring for the newborn infant**

- a. Pain control for infants undergoing procedures
- b. Restraint for procedures in infants
- c. UNCRC and Maternal and Child Friendly Healthcare Initiative (MCFHI)
- d. 3-day course in Medical Ethics and Professional Standards (already performed in Liberia July 2015)
- e. Care for the family, including the breaking of bad news, withdrawing treatment when palliative care is the only possible way forward.

### **Months 10 and 11**

Consolidation of the training

### **Month 12**

Final analysis of the continuous assessment materials collected during the training and decision on accreditation of each candidate following an OSCE.



TRAINEE'S NAME:	SUPERVISOR'S NAME:	DATE OF PROCEDURE:
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NEWBORN INFANT'S NAME: MOTHER'S NAME:	DATE OF BIRTH OR AGE:	HOSPITAL:
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REASON FOR TREATMENT:

DESCRIBE TREATMENT GIVEN INCLUDING ANY PROCEDURES AND DRUGS USED

AT TIME OF ONSET OF TREATMENT:

Pulse rate in beats/min:  
Respiratory rate in breaths/min:  
Capillary refill time in seconds:  
Temperature in degree C:  
Was shock present?  
Was the baby fitting?  
Was hypoglycaemia present?  
What was blood glucose?:  
Was the baby jaundiced?

DURATION OF TREATMENT:

WAS BLOOD TRANSFUSION NEEDED AND AVAILABLE?

WAS NEONATAL RESUSCITATION NEEDED?

DESCRIBE ANY UNEXPECTED PROBLEMS WITH TREATMENT GIVEN?  
ANY EQUIPMENT PROBLEMS?

IF INFANT HAS JUST BEEN BORN DESCRIBE STATE OF BABY AT ONSET OF ANY RESUSCITATION GIVEN:

Breathing? Normal, gasping or apnoeic?  
Colour?  
Muscle tone?  
Heart rate > 100 or < 100 or < 60 beats/min.  
What was Apgar score at 5 minutes?

IF BABY WAS RESUSCITATED DESCRIBE WHAT WAS DONE  
Bag and mask?  
Chest compressions/  
Drugs?

DID BABY SURVIVE?  
IF NOT DESCRIBE WHAT HAPPENED HERE:

SIGNATURE OF TRAINEE

SIGNATURE OF SUPERVISOR

**LOG BOOK FOR PROCEDURES UNDERTAKEN AS PART OF BASIC NEONATAL CARE**

## CASE-BASED DISCUSSION (CBD) form

**TRAINEE'S NAME:**

**ASSESSORS NAME:**

**CLINICAL PROBLEM**

**ENCOUNTERED:**

**SUMMARY OF CASE**

**DISCUSSED:**

**SUMMARY OF**

**TEACHING POINTS:**

**ASSESSMENT OF TRAINEE'S KNOWLEDGE/MANAGEMENT OF DISCUSSED CASE:**

**MEETS OR EXCEEDS EXPECTATION:**

**BELOW EXPECTATION:**

**ASSESSOR'S**

**RECOMMENDATION:**

**TRAINEE'S SIGNATURE**

## **SUPERVISOR-OBSERVED EXPERIENCE (SOE) form**

**TRAINEE'S NAME:**

**ASSESSORS NAME:**

**CLINICAL PROBLEM**

**ENCOUNTERED:**

**SUMMARY OF CASE**

**OBSERVED:**

**SUMMARY OF KEY**

**MANAGEMENT**

**POINTS:**

**ASSESSMENT OF TRAINEE'S CLINICAL SKILLS IN MANAGING OBSERVED CASE:**

**MEETS OR EXCEEDS EXPECTATIONS:**

**BELOW EXPECTATIONS:**

**ASSESSORS RECOMMENDATION:**

**TRAINEE'S SIGNATURE:**

**ASSESSOR'S SIGNATURE**

## APPENDIX B 3-day Neonatal Care Course Programme: Liberia

Day 1				
8.00 - 8.30	Faculty meeting			
8.30 - 9.00	Registration and photos			
9.00 - 9.15	Welcome and introduction: what to expect from the course			
9.15 - 9.30	Putting care of newborn infants into context in Liberia			
9.30 - 9.45	The small baby			
9.45 - 10.15	Infection control			
10.15 - 10.45	Breakfast			
10.45 - 11.15	Skin to skin Mother Care			
11.15 - 11.45	Nutrition and feeding			
11.45 - 13.45	Workshop/Skill stations; 1 Skin to skin Mother Care, 2 keeping babies warm, 3.Breast feeding problems 4.Hand hygiene + utensil sterilisation			
Times	11.45-12.15	12.15 - 12.45	12.45 - 13.15	13.15 - 13.45
Faculty				
1 A+B	A	B	C	D
2 C+D	B	C	D	A
3 E+F	C	D	A	B
4 G+H	D	A	B	C
13.45 - 14.30	Lunch			
14.45 - 15.30	Resuscitation at birth			
15.30 - 17.00	1. Resuscitation at birth workshop 2.Resuscitation at birth skill station			
Times	15.30 - 16.15		16.15 - 17.00	

Faculty		
1 A+B	A	B
2 C+D	B	A
3 E+F	C	D
4 G+H	D	C
17.00-17.15	Meet mentees	
17.15 - 17.30	Faculty meeting	

<b>Day 2</b>				
8.15 - 8.45	Faculty meeting and set up			All
8.45 - 9.00	Registration			
9.00 - 9.45	Infections in babies			
9.45 - 10.30	Respiratory illnesses			
10.30 - 11.00	Breakfast			
11.00 - 13.00	Workshops/skill stations 1. Pain/iv drugs. 2. The partogram 3. Recognising the ill baby 4. Pulse oximeter and oxygen use			
Station	11.00 - 11.30	11.30 -12.00	12.00 - 12.30	12.30 - 13.00
1 A+B	A	B	C	D
2 C+D	B	C	D	A
3 E+F	C	D	A	B
4 G+H	D	A	B	C
13.00 - 14.00	Lunch and prayers			
14.00 - 14.45	Jaundice			
14.45 - 16.45	Simulations: infections, jaundice, respiratory			
Station	14.45 - 15.15	15.15 - 15.45	15.45 - 16.15	16.15 - 16.45

1 A+B	A	B	C	D
2 C+D	B	C	D	A
3 E+F	C	D	A	B
4 G+H	D	A	B	C
16.45 - 17.15	Faculty meeting			

<b>Day 3</b>				
8.15 - 8.45	Faculty meeting and set up			All
8.45 - 9.00	Registration			
9.00 - 9.45	Convulsions			
9.45 - 11.45	Workshops 1 referral +SS 2. Transfer workshop 3.The baby who will not live long 4.Taking the course back to the workplace incl. monitoring			
Station	9.45-10.15	10.15-10.45	11.15-11.45	11.45-12.15
1 A+B	A	B	C	D
2 C+D	B	C	D	A
10.45-11.15	Breakfast			
3 E+F	C	D	A	B
4 G+H	D	A	B	C
12.15-14.15	Simulations : convulsions, resuscitation, transfers			
Station	12.15-12.45	12.45-13.15	13.15-13.45	13.45-14.15
1 A+B	A	B	C	D
2 C+D	B	C	D	A
3 E+F	C	D	A	B
4 G+H	D	A	B	C
14.15 - 15.15	Lunch and prayers			



15.15 - 16.00	Resuscitation practice and queries with mentors 3 groups	
16.00 - 16.30	MCQ	
16.30 - 17.00	Simulation test	
17.00 - 17.30	Faculty meeting	
17.30 - 18.00	Presentations and close	All