### Appendix I: Questionnaire for healthcare providers

#### MARAGUA DISTRICT HOSPITAL Questionnaire for health care providers Date: For questions in this section, provide answers or select one correct answer for each question: 1. Initials 2. Qualifications: Nursing Officer [ ] Medical Officer [ ] Medical Officer Intern [ ] Clinical Officer anaesthetist [ ] Clinical Officer Intern [ ] Clinical Officer [ ] 3. Department: Labour Ward [ ] Maternity Theatre [ ] Newborn Unit [ ] Postnatal Unit Reproductive Health/MCH [ ] 4. Have you been trained in ETAT+? Yes [ ] No [ ] If yes, to question number 4, when did you receive this training (year)? 5. Have you ever attended any newborn care course? No [ ] Yes [ ] If yes, which one(s): Newborn Advanced Life Support (NALS) **Essential Newborn Care** Emergency Obstetrics and Newborn Care (EmONC) Other (specify) -----

For questions in this section, select and circle the one most correct answer for each question:

- 6. Drugs that are recommended for use in the first few minutes of newborn resuscitation in a pulseless baby include?
  - a. Hydrocortisone
  - b. 50% Glucose
  - c. Sodium bicarbonate, 8.4%
  - d. Aminophylline
  - e. None of the above

### 7. In newborn resuscitation which of the following statements is true?

- a. All children born through thick meconium stained liquor should receive airway suction as the first step in resuscitation
- b. It is essential that intravenous glucose is given in the first 5 minutes of resuscitation to babies with asphyxia
- c. Sodium bicarbonate has been proven to improve the metabolic acidosis post-resuscitation in severe asphyxia
- d. Aminophylline should be given if spontaneous respiration is not observed within 5 minutes of initiating resuscitation
- e. None of the above are true

### 8. Regarding newborn resuscitation, which of the following statements is true?

- a. Deep suction should be routinely performed on babies born through meconium stained amniotic fluid even in vigorous crying babies to prevent aspiration pneumonia
- b. Asphyxiated babies routinely require bicabornate as one of the first resuscitative measure after delivery as they are almost always acidotic
- c. If a Pulse Oximeter is available, at the time of delivery, the aim is to have saturations of >90% within the 1<sup>st</sup> minute of life, hence oxygen should be routinely used with the Bag Valve Mask Device.
- d. The first minute of life is to be spent on uninterrupted ventilation if the baby fails to establish breathing after birth
- e. If you are in facility without ability to intubate, all babies with suspected meconium aspiration should be transferred to another facility without attempting use of BVM if the baby fails to breath

### 9. If you have given ventilations to a newborn requiring resuscitation for one minute, what step should be taken next?

- a. The helper needs to establish IV access and push bicarbonate for the Circulation.
- b. Give oxygen by facemask and re-check the pulse within 30 seconds
- c. Listen for the pulse and if less than 60 begin chest compression at a rate of 3:1 breath
- d. Chest compressions are to be started at a rate of 3:1 for all babies who are not breathing
- e. Give ventilations at a rate of 80 breaths per minute so as to achieve faster ventilations

### 10. The newborn baby warm chain includes:

- a. Provision of a clean and warm surface
- b. Immediate bathing of the baby to make the baby clean
- c. Immediate drying of the newborn baby
- d. Wrapping the baby and giving it to the mother guickly after birth
- e. Putting the baby to the mother's breast

### 11. Regarding heat loss by the newborn, the following statements are true, except?

- a. Turning on the radiant warmer protects the baby form heat loss by radiation
- b. Drying the baby prevents heat loss by evaporation
- c. Pre-warming the towels prevent heat loss by conduction
- d. Covering the baby prevents heat loss by convection
- e. Liquid paraffin massage prevents heat loss by evaporation

### 12. Which statement is true? When resuscitating newborn infants:

- a. Oxygen is never needed
- b. Oxygen should be attached to the Bag-Valve-Mask device and used as a routine
- c. Oxygen is known to be completely safe
- d. Oxygen is not needed routinely but should be available if required
- e. Aim at Oxygen saturations above 90% within the first minute after birth

### 13. Which statement is true? When performing a newborn resuscitation:

- a. Give 3 breaths for every one compression in the newborn
- b. Give 15 breaths to every 2 compressions in the infant
- c. Give 2 breaths to every 15 compressions in the newborn
- d. Compressions are required in newborns with a heart rate of <60 beats per minute
- e. Aim at giving 60 breaths per minute within the first minute of resuscitation

# 14. Regarding the newborn baby. Select the most suitable first action. You walk into the delivery room as a baby is being delivered. The birth assistant clamps and cuts the cord. She passes you the baby. As you carry the wet baby to a flat surface you notice it hasn't taken a breath and that there is no meconium around the face.

- a. Dry and stimulate the baby
- b. Give inflation breaths
- c. Pass the baby for skin-to-skin
- d. Place the head in the neutral position
- e. Start chest compressions

### 15. What are the initial steps of resuscitating a newborn:

- a. Dry, assess colour, tone, cry, cover and position airway
- b. Position airway, give breaths with Chest compressions (1:3), IV Adrenaline
- c. Suction airway, position airway, assess breathing and activity, give 5 breaths
- d. Dry and cover, insert Guedel airway, clean airway, give breaths with chest compressions (1:3)
- e. Call for Help. Start ventilation 30 breaths/min

### Appendix II: Questionnaire for audit criteria 2

### **Audit of structures**

ITEM	1	2	3
Warming device for room or resuscitaire			
Two warm towels			
Hands washing facilities or hand sanitizer			
Cord clamps available			
BVM available for delivery and clean			
Suction device available for delivery and clean			
Suction catheters available and clean			
Resuscitation starts within one minute of birth if needed			
TEO available for eye prophylaxis			
Chlorhexidine available for cord care			
Baby placed skin to skin with mother			

<sup>1 =</sup> Not available
2 = partially available/available and not ready for use
3 = available and ready for use

### Appendix III: Questionnaire for audit criteria 4

### MARAGUA DISTRICT HOSPITAL

1.	Place of delivery Maragua DH [ ]		[ ]	Empty [ ]
2.	Mode of delivery SVD [ ]	: CS [ ]	Emp	ty [ ]
3.	Time of delivery: Day 7am – 7pm		-7am [ ]	Empty [ ]
4.	Gender: Male [ ]	Female [ ]	Empty	[ ]
5.	Birth weight: <1500g [ ]	1500g – 2500g [ ]	>2500g [	] Empty [ ]
6.	APGAR score: 1 min [ ]	5 min [ ] 10mi	in [ ]	Empty [ ]

### Appendix IV: Questionnaire for audit criteria 5

### MARAGUA DISTRICT HOSPITAL

1.	Maragua DH [ ]	Referral	[]	Empt	y[]	
2.		S[]		Empty [ ]		
3.	Time of delivery: Day 7am – 7pm [ ]	Night 7	′pm – 7am	[]	Empty [	]
4.		Female [	]	Empty	[ ]	
5.	<b>Birth weight:</b> <1500g [ ] 1500g	– 2500g [	] >250	00g [ ]	Empty [	]
6.	APGAR score: 1 min [ ] 5 min	[ ]	10 min [ ]	Empty	/ [ ]	
7.	Resuscitation done: Yes [ ]	No [ ]		Empty [ ]		
8.	If resuscitation done, Stimulation [ ]	tick all that	apply:	Use of suction	on device	[ ]
	Use of bag valve mask device [ ]		Oxygen [ ]			
	Chest compressions	[ ]		Empty [ ]		
9.	•	and resuscitated		ts: nknown [ ]		

## Appendix V: Educational material for basic newborn resuscitation skills for healthcare providers

Lecture on newborn resuscitation (resources from www.idoc-Africa.org)