



**Key features** - The initiative aims at resuscitation /stabilisation of ill mother and/or baby presenting with emergencies including haemorrhage or breathing difficulties of the new born, prior to transfer by ambulance to a secondary /tertiary care centre in mid – to low resource countries.

**Background** – Maternal and Child mortality in low resource settings are largely preventable. These are associated with medical, public health and societal/cultural issues linked with the three-delay model. Many countries have strengthened resources at the institution/hospital level and are promoting hospital-based deliveries for majority of women, through incentives and programme improvements.

In emergency situations such as haemorrhage or difficulties with breathing for the new born, speedy transfer to the hospital by ambulance remains the preferred option. There is a good deal of evidence to suggest that timely basic resuscitation and stabilisation **prior to ambulance transfer**, substantially improves the outcome for mother and baby. Empowering health workers at the community level (ambulance crew, nurses and midwives and doctors) including their training in basic resuscitation, provision of necessary resources, ambulances and improving communication will bridge a gap which currently exists in the emergency care of mothers and babies at the community level.

**Maternity Emergency Response Network (MERN)** - There is also a need for behavioural changes to treat these as serious emergencies triggering a “red flag alert” – the golden hour concept. These should form the basis for a Maternity Emergency Response Network (MERN)– between the community, transport including ambulance and the receiving hospital/institution. A hub and spoke model covering the whole target area is desirable.

### **MERN Survival Kit**

A list of resources/actions needed is given below. The aim is to develop and equip an efficient ,low cost Emergency Ambulance service capable of handling emergencies in the mother and new born babies, at the community level, supported by Maternity Emergency Response Network. The work is best coordinated by a paid administrator for the whole target area.

**Modular Action : The choice of modules should follow prior needs assessment.**

**Module 1 -Delivery Kit for normal delivery**

**Module 2 – Intravenous fluid administration equipment – please see Appendix**

**Module 3 – Equipment for catheterisation - please<sup>i</sup> see Appendix**

**Module 4 – Equipment and drugs for resuscitation of mothers and babies – please see Appendix**

**Module 5 A -CELLPHONE** with app.- instructions for emergencies, videos related to specific emergencies , optional tele-medicine set up. ***Initiating red flag alert (at the Community, transport, and the receiving hospital)***

## MATERNITY EMERGENCY RESPONSE NETWORK - CHILDBIRTH SURVIVAL KIT

**Module 5 B-TRACKING DEVICE** – to keep receiving hospital / department informed during transfer – *following a red flag alert as above*

**Module 6 -TRANSPORT** - Up dating existing Ambulance team work or purchasing E-RANGER BIKE- please add details of local preference and availability. E- Ranger bike ambulance can be imported or assembled in country. Training of Ambulance, primary health care staff in basic resuscitation and phlebotomy (Module 7).A Hub and spoke mapping will be used to cover the target area.

**Module 7 -TRAINING AND RETRAINING IN BASIC RESUSCITATION** – for all professionals at the community/primary care level. Also adding IV therapy strategies

**Module 8 – APPOINTMENT OF AN ADMINISRTATOR** – for MERN, appropriately trained (specially with a public health background) and remunerated should be considered. He/She will be responsible for coordination, administering a hub and spoke concept, raising profile and awareness, data collection and regular reporting. Action needed - Job description, method of appointing, funding required to support the network.

Please send your comments and suggestions to [drhbasumd@gmail.com](mailto:drhbasumd@gmail.com)

FURTH DRAFT – DR. H.BASU

30<sup>th</sup> January,2018

### Appendix

#### Module 1 -Delivery Kit

- Gloves, Towels
- Sterile delivery pack -x2
- Chlorhexidine gel
- Cord clamps, scissors,blades
- Misoprostol – 200 microgramme x 6 – see below
- Fetal heart monitor /Pinard’s stethoscope

#### Module 2 A -IV Cannulation (contents stored in a plastic bag)

- 16-gauge cannula x 3
- 10 mL syringes x 6
- Clear adhesive IV site dressing x 2 (e.g. Tegaderm)
- Alcohol wipes -box
- 0.9% Sodium Chloride for injection 10 mL x 4
- Tourniquet x 2

#### Module 2 B- IV Fluids

- Hartmann’s solution 1 litre x 2
- Gelofusine 500 mL x 2

## MATERNITY EMERGENCY RESPONSE NETWORK - CHILDBIRTH SURVIVAL KIT

- Airway filter for Gelofusine x 1 (e.g. vented spike)

### Module 2 C-IV Giving set

- IV Baxter giving set with 200-micron filter x 2 (blood administration line)  
Syntocinon infusion (contents stored in a plastic bag)
- “Medication Added” labels x 6
- 10 mL syringe x 3
- 2 mL syringe x 3
- Needles: 18-gauge x 2, 21-gauge x 2, 23-gauge x 2
- Alcohol wipes – as above
- HDU fluid balance chart -set

### Module 3 - Indwelling catheter equipment

- 14-gauge Foley’s catheter x 2
- Disposable dressing tray x 2
- 0.9% Sodium Chloride (normal saline) sachet x 1
- 5 mL syringe x 3
- 10 mL water for injection ampoule x 3
- Urine drainage bag x 3

### Module 4 A - Emergency thermal blanket

- Silver space blanket x 1
- Incubanket x 3 ( Maternova)

### Module 4 B- Drugs

- Misoprostol 200 mcg tablets x 16 – kept in PPH box
- Carbetocin 100 microgramme x 5
- TXA – 1 Gm x 10 (Tranexamic Acid injection )
- Magnesium sulphate (25 %) – 10 ml x 5
- Calcium Gluconate (10 %) – 10 ml x 2
- Injectable Cefpodoxime, Clindamycin -600 mg, Azithromycin,

### Module 4 C -Resuscitation

- B.P instrument
- Thermometer
- Pocket mask
- Airway
- Ambu bag and mask
- Oxygen supply

## MATERNITY EMERGENCY RESPONSE NETWORK - CHILDBIRTH SURVIVAL KIT

- Pulse Oximeter
- NASG – anti shock garment ( VIA Global Health) -2
- Fetal Heart rate monitor – see above
- Patellar Hammer
- Suction catheter
- stethoscope

### **Module 4 D-CHARTS .... Locally adapted from simplified Partogram (excluding cervicograph)**

- WHO Check List
  - Vital signs
  - Therapy given
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