CMG 5(b) – NEWBORN RESUSCITATION

(Revised: August 2016)

newborn: birth to 24 hours
(cardiorespiratory physiology is in transition from an intra-uterine environment)

Cardiac arrest in a ***newborn*** should be managed with a **compression-ventilation ratio of 3:1**.

Babies aged *more than 24 hours beyond birth* should be managed according to paediatric guidelines, particularly with a **compression-ventilation ratio of 15:2**.

Approximately 10% of infants require some assistance to begin breathing at birth, but less than 1% requires extensive resuscitation.

THIS CMG ASSUMES THAT BABY HAS BEEN DELIVERED, AND BREATHING / CIRCULATION HAVE BEEN ASSESSED AS INADEQUATE

(See CMG 26a & b for delivery techniques).

PULSE OXIMETRY IN THE NEWBORN

It is important to note that SpO_2 increases over several minutes in a newborn; there is no need to try to push saturations above expected levels in the treatment of newborns.

Peripheral cyanosis in the newborn (lips, hands and feet) is a normal occurrence, lasting up to 48 hours.

Persistent **central cyanosis** (beyond 10 minutes) is significant, and necessitates rapid transport.

EXPECTED SpO_2:	
1 minute:	60 – 70%
2 minutes:	65 – 85%
3 minutes:	70 – 90%
4 minutes	75 – 90%
5 minutes:	80 – 90%
10 minutes:	85 – 90%

ICP	Prevent heat loss and stimulate baby (brisk but gentle drying with a towel, then wrap/cover baby, including head but not face) (pre-term or low birth weight baby – dry head only, place baby in polyethylene bag up to neck)	**AP**
ICP	Clamp and cut umbilical cord (if applicable)	**AP**
ICP	Suction *only if required* (e.g. suspected meconium aspiration)	**AP**
ICP	If heart rate is persistently <100/minute, or baby is gasping or apnoeic: **ventilate with air** (ventilate at 40 – 60/minute, with PEEP 5cmH_2O)	**AP**
ICP	If heart rate continues to decrease despite 30 seconds of adequate ventilation: check for leaks, reposition airway manually, consider airway adjuncts and add 100% oxygen	**AP**
ICP	If heart rate is <60/min: start chest compressions and ventilate with **100% oxygen** (3:1 compression:ventilation)	**AP**
ICP	Consider vascular access (do not delay treatment or stop CPR for this)	**AP**
ICP	If heart rate remains <60/min despite 30 seconds of effective CPR: **adrenaline** **IV/IO** – 0.01mg/kg **ETT** – 0.02mg/kg Repeat adrenaline every 3 minutes while heart rate remains < 60/minute despite effective ventilations and chest compressions	**AP**

REMEMBER:

Reassess the baby every **30 seconds**.

Do not delay / stop CPR for any invasive treatment.

If baby regains vigour, and/or has ROSC:

- early transport
- focus on maintaining heart rate and respirations
- check BGL at earliest opportunity, and treat (as per CMG 10) if <2mMol/l