Supplemental Data File

Simulation Case

a term newborn delivered by caesarean section because of fetal distress with a clinical suspicion of a placental abruption. At the initial assessment, the heart rate (HR) of the manikin was set at a rate of 40 beats per minute (BPM) with no spontaneous breathing. Colour and muscle tonus were provided by the operator of the mannequin and were ‘pale / blueish’ and ‘weak’ respectively. In order to evaluate adherence to guideline, all airway attempts (inflation and ventilation) were deemed successful. Chest compressions did not result in an increase of HR. Intravenous access using an umbilical catheter had to be established to provide epinephrine or a fluid/blood bolus. After this, HR and spO2 did recover to 125 BPM and 90% respectively. There was still no spontaneous breathing so ventilation had to be continued.

Assessment of Adherence to Guideline (all steps in accordance to the 2015 ERC NLS Guideline)

Preparation

Checks the function and settings of oxygen supply

Turns radiant warmer on

Resusciation

Time of Birth __:__ (used to sync time of recording to start of simulation)

Starts APGAR Clock

Temperature control

- Dries the baby immediately
- Puts cap on
- Removes wet linnen
- Covers to prevent further heat loss

Initial Assessment
- Heart Rate
- Breathing
- Color
- Tone
- Time < 30 seconds (used to evaluate delay between groups but is not scored)

Airway and Breathing

Airway Management
- Neutral position
- Jaw thrust

Inflations
- Initiates inflations
- Duration of 2-3 seconds
- Amount of five
- 5 inflations within 1 minute?
- Total time to completion
- Participant checks for thoracic excursions

Evaluation
- HR
- Breathing
- Color
- Tone

Assisted Ventilation
- Initiates ventilation
- Time to initiate ventilation
- Duration of 30 seconds?
- Keeps checking for thoracic excursions

Evaluation
- HR
- Breathing
- Color
- Tone

Circulatory Support

Chest Compressions
- Recognizes the need to start chest compression HR < 60/min
- Time until initiation of chest compressions
- Correct ratio (3:1)
- FiO2 increase?

Evaluation
- After 30 seconds?
- HR
- Breathing
- Color
- Tone

Intravenous access & Drugs
- Seeks intravenous access through an umbilical venous catheter
- Provides epinefrine
- Correct dose (10ug/kg)
- Time until epinefrine has been provided
- 2cc NaCl 0,9% Flush
- Provides Fluid or Blood bolus
- Correct dose (10ml/kg)
- Continues BLS during above

Evaluation
- Every 30 seconds?
- HR
- Breathing
- Color
- Tone

Recovery

- Identifies a climbing heartrate and ceases chest compressions when HR >60/min
- Continues ventilation
- Temperature control (cap still on and covered?)