RMH Scenario: Cyanosed Newborn_with respiratory distress

Set Up:

Mannequin	Moulage	Equipment available	Drugs available
SimNewbi	Cord attached	resuscitaire	adrenaline
Mother	IV available for mother	neopuff	oxygen
Mama Natalie	IV available for baby	Self inflating bag	prostin
Confederate ER nurse		Saturation monitor + probe	Inotrope
		Neonatal stethoscope	10% dextrose
		Chest needling pack	0.9% Saline
			Penicillin & gentamicin
			surfactant

Monitor: Oxygen saturation with heart rate only initially

Paperwork Required:

Observation Chart	-
Drug Chart	-
Arrest chart	
Blood gas – arterial	x
- venous	x
- capillary	

Learning Objectives: **(1) Medical:** Clinical decision making of cyanosis at birth with respiratory distress
Stabilising a mother post normal vaginal delivery

(2) CRM principles: obstetric/midwifery/neonatal nursing and medical team (communication/ handover/ teamwork)

Synopsis of Scenario

Term neonate delivered in a car. Father runs in with the mother and mother follows on a trolley. Obstetric and neonatal code should be called. Infant perfusion is 5sec. Team to assess and commence basic neonatal life support with consideration to progress to advanced neonatal life support. Mother: normal pregnancy, primigravida, no medical problems

Mode of bringing team into the room

Father comes running in with the baby who was born in the car outside the hospital. Mother comes in on trolley, having delivered in the car driving past the hospital. Confederate ER nurse calls ER nurses for help. The RMH medical team are then called in. Confederate nurse should prompt to call obstetric and neonatal codes if the RMH team do not. ***Midwives & Neonatal team arrive***

Patient Demographics

Patient Name:	Baby Winter	**DOB/Age:**	Day 0		
Medical Record#:	N/A	**Weight:**	4 kgs		
Allergies:	N/A	**Male**		Female	x
Dx/Procedure:	N/A				
Other:					

Introductory information:

My baby delivered in the care- my wife is outside and coming in on a trolley. My baby looks blue, can you please help?

ISBAR Handover of mother

I This is Shelley WINTER
S She just delivered a baby in the car outside the hospital
B She has been well. She is a P2G2 and has had no complications
A Her BP is 110/70 and HR is 90/min
R She needs review & support by the obstetric and midwifery team as her baby is unwell

ISBAR Handover of newborn (confederate to Rmh team)

I HI, I am …..this is a term baby WINTER
S The baby delivered in the car
B There were no antenatal complications
A The baby has remained blue and has respiratory distress
R I think the baby needs urgent assistance with breathing

Initial Observations of the Mother

	↑, N, ↓, absent	Description
Appearance	Well, Not distressed, alert and active	
HR	**N**	**90/min**
RR	**N**	**18**
Temp – peripheral	**N**	
Saturation	**N**	**98%**
Non- invasive BP – upper limb	**110/70**	

Initial Observations of neonate:

	↑, N, ↓, absent	Description
Appearance	Cyanosed centrally, perfusion 4-5 sec	
HR	↑ 170	Low volume pulses, all present
RR	↑ 65	Comment:
Temp – peripheral	N	
Saturation	75% upper limb	64% in lower limbs
Non- invasive BP – upper limb	48/30	No Limb difference

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Examination of the Mother

Examination:

- Warm and well perfused
- Mild pitting oedema of lower limbs
- Firm uterus
- CVS/Resp exam normal

Examination of Neonate:

- Fontanelle-normal
- Perfusion < 3 sec
- Infant floppy, eyes closed
- Chest: normal breathing A/E equal (state no pneumothorax if listen &/or ask)
- Pulses: UL & LL normal
- Cardiorespiratory exam-normal
- Abdominal exam (liver edge)

Ideal Maternal Management

- Call Obstetric emergency/call to RWH
- Monitor blood loss
- Ensure oxytocin 10 units IM given
- Take Vital signs 15 minutely for 1 hour
- Deliver Placenta-Controlled cord traction
- Check Perineum and Placenta
- Communicate with mother in regards to baby

Ideal Neonatal Management:

- Call Neonatal Code Blue
- Check Resuscitaire
- Check Airway & breathing
- Establish saturation monitoring
- Listen to heart and feel pulses
- Starts IPPV-transient inc SpO2 82%
- Increased PIP
- Maintains oxygenation as high as can get after 5 minutes
- Transilluminate (state no pneumothorax)
- Considers RDS/ cardiac/pulmonary hypertension
- Consider UVC + 20ml/kg Nsaline(advanced resus)
- Team asks for maternal history

Progression Poor: Mother

CUES

- Check Vital signs
- PV bleeding if No oxytocin given
- Need to deliver placenta

Ideal Management of Mother

- As above
- Rub uterus

Progression Poor: Neonate

CUES:

- Cued by NICU nurse if not checking spO2: 10% difference between UL & LL oxygen saturation-
- Perfusion worsens to 6sec-cue
- State no pneumothorax if listened for &/or ask)

Ideal Management as above: unlikely to go further in this scenario

- Maintains IPPV
- Maintains oxygenation as high as can get
- Considers intubation (depends on participants)
- UVC insertion for NSaline 20ml/kg

- Consider surfactant in delivery room
- Checks pre-post-ductal SpO2
- Discusses pulmonary hypertension vs cardiac
- blood gas
- Ask for CXR
- Gives antibiotics
- Considers prostin
- Consider inotropic support

Scenario finishes after 10-15 minutes after effective communication and stabilisation of the baby with respiratory distress

Resources: NeoResus www.Neoresus.org.au
NETS Neonatal Handbook: Management of the Shocked Newborn