Neonatal Scenario 1: Collapsed Neonate – Septic vs Cardiac

SET UP:

Mannequin/Confederate	Moulage	Equipment available	Drugs available
SimNewB	IO access	Resuscitaire/Overhead warmer	Volume (NSaline)
Parent	Cold peripherally	Self inflating bag / neopuff	AB's
NETS/neonatal consultant on the phone	IV available in resuscitaire	Airway trolley	Prostin
Referring doctor (if enough)		Circulation trolley	10% Dextrose
triage nurse		Glucometer	Adrenaline
		Blood gas	Inotropes
		IV tubing	Intubation drugs: fent, morphine/sux/atropine
			glucagon

Monitor: Basic ICU –Saturation probe with heart rate & ECG leads

Paperwork Required:

Observation Chart	√
Drug Chart	√
Arrest chart	
Blood gas – arterial	
- venous	
- capillary	√
Blood results - glucose	√
CXR	√
Other imaging –	
ECG	N/A

Learning Objectives:

(1) Medical Resuscitation of Collapsed Neonate at 12 days
Sepsis vs Cardiac clinical decision making

(2) CRM Teamwork, communication between team and with RWH

Synopsis of Scenario

12 day old collapsed term baby. Uncertain if septic or duct dependant cardiac lesion. Expected to resus & start treatment for both including Intubation & Ventilation.

Mode of bringing participants into the scenario

Triage nurse assesses and asks for help from the emergency team. Emergency team start assessing and instigate treatment put a call out to RWH for a neonatal code blue.

PATIENT DEMOGRAPHICS					
Patient Name:	Freddie Smith	**DOB/Age:**	12 days		
Medical Record#:		**Weight:**	3.2 kgs		
Allergies:	nil	**Male**	√		
Dx/Procedure:	nil				
Other:					

Introductory information

A mother was bringing her sister to the ER and asked the team to see her 12 day old male baby (wt 3.2kg) She described the following:

- just regained BW
- feeding poorly last 3 days
- unsettled overnight
- 'funny breathing' this morning
- 'not waking' for feeds
- 'felt cool'

Mother presents an ISBAR Handover

I Hi, I am Alicia Smith and this is Freddie who is 12 days old.

S He looks really unwell

B He was born normally and I had a normal pregnancy but hasn't been feeding well for the past 3 days and seems to be breathing fast

A & R together I am very worried that he needs to see a doctor urgently

INITIAL OBSERVATIONS:

	↑, N, ↓, absent	Description
Appearance	Pale, mottled,(cue) cold periph	
HR	↑ (200)	weak pulses/ femorals off
RR	↑ (75)	deep
Temp – peripheral	35	Only if asked for
- central		
Saturation	absent	Poor trace
Non- invasive BP – upper limb	50/39	narrow pulse pressure if cuff placed on (unrecordable in LL)
- lower limb		
Invasive BP	48/40	If PIA inserted
Pupils	N	

Ideal Mx:

Examination:		**Management:**	
- Perfusion	☐	Oxygen	☐
- Fontanelle	☐	- Monitoring	☐
- Respiratory	☐	- respiratory support	☐
- Cardiac	☐	- attempted IV access	☐
- pulses (upper vs lower)	☐	- Bloods, glucose (1.8) & gas (acidotic)	☐
- liver	☐	- Volume given	☐
- BSL	☐	- Antibiotics (pen & gent)	☐
		- Temperature regulation	☐
		- Prostin	☐

Progression Good:

CUES:	**Ideal Management:**
	Intubate & Ventilate Secure IV access (consider IO) Consider inotropes Discuss with Neonatal consultant/cardiologist

HR ↓ to 180/min, RR 55, SpO2 91% if intubated, volume given, antibiotics given and prostin commenced

Progression Poor:

CUES:	**Ideal Management:**
Resp: ↑ rate Then apneic (RR 0)	Bag mask support Intubated & Ventilated volume
CVS: **cue:** perfusion worsening	CPR & resus drugs
Set on monitor: absent pulses bradycardia (40/minute)	Discussion with Neonatal consultant

HR 100/min and RR 50 if intubated, given volume, and appropriate CPR given

Scenario finishes after 10 minutes or after intubation and volume given, consideration for sepsis &/or cardiac discussed, with appropriate management, and discussion with NETS consultant & parents.

References: NETS guidelines Neonatal Handbook