Deteriorating Bronchiolitic patient on the ward
Scenario

Set Up:

Mannequin /Confederate	Moulage	Equipment available	Drugs available
SimBaby	Nasal prongs oxygen 2l/min	Oxygen masks	Volume
Confederate - mother	Peripheral IV	Bag & mask	Antibiotics- Flucloxacillin/ gentamicin/cefotaxime
Confederate - nurse		Suction equipment	Caffeine citrate IV
Confederate - Dr if required		NG tube	Resuscitation drugs
		Airway trolley	Intubation drugs
		Circulation troll;ey	
		MET trolley	

Monitor: Basic

Paperwork Required:
Age appropriate oobservation chart -filled in just below MET criteria
Drug Chart
Blood gas - capillary
Blood glucose
CXR in case needed

Learning Objectives:

(1) *Medical*

- Management of the infant with deteriorating bronchiolitis
  Understand options/indications for respiratory support

(2) *CRM*

- Clinical handover-
  communication
  leadership & role delegation

Synopsis of Scenario

Ex – 29 week female infant, now 3 months post-term (6 months old), on 2l/min nasal prong oxygen, admitted during the day. Deteriorates at 10pm at night after a breast feed, with respiratory compromise. Initially confederate calls ward nurse. Recognition of deteriorating patient & local support/Paed Reg/MET Team (depends on participants) called. Assess need for airway support, whilst ensuring adequate handover and communication with family.

Patient Demographics

Patient Name:	Bobby Johnson	**DOB/Age:**	3 months corrected (ex29/40)		
Medical Record#:	6999011	**Weight:**	6 kgs		
Past History: Allergies	Bronchiolitis at 1 month corrected age- admitted overnight. Nil	**Male**	☒	**Female**	☐
Diagnosis:	Bronchiolitis				

Confederate nurse calls 1st participant (ward nurse) for help

Confederate nurse increases oxygen & calls for help to ward nurse

Handover as per ISBAR

I Introduces self, Bobby Johnson

S Ex-prem with bronchiolitis. Desaturating after a feed

B Ex-29 weeks. Corrected 3 mths. Day 3 of bronchiolitis. Usually just requiring 1-2l/min nasal canula oxygen. Mother just fed the baby

A now desaturating & working hard

R have turned up oxygen. Can you call for help?

Initial Observations:

Confederate nurse is at the bedside holding the nasal prongs on the baby's face

	↑, N, ↓, absent	Description
Appearance	floppy, CR 3-4 sec	
HR	↑	195 SR
RR	↓	55, ↑ work of breathing initially, but becomes apnoeic during the handover
Temp – peripheral	↑	38.8
Saturation	↓	88% in 2 l/min, decreases during the handover- becomes cyanosed with SpO2 ↓ 82%
Non- invasive BP – upper limb	↑	85/42 when asked for
Pupils	Normal	

Ideal Management: Local call for help gets 2 nurses & 1 Dr

Examination:	Management:
DRSABC Bag mask ventilation	Introductions /Ask for handover/assign roles Take off nasal prongs and apply oxygen by mask Increase FiO2 Bag & mask ventilation Suction MET call Communicate with family Consider Bloods-glucose/gas/CXR blood Culture /FBC /CRP (check if these have been done recently)

Effective bag & mask ventilation keeps HR >100. Sats increase to low 90's
Failure to bag baby → bradycardia down to 55. Full CPR required.

Progression Good: MET team arrive (3-4mins)

CUES:	**Ideal Management:**
PROMPTS: Poorly perfused Worsening cap refill 5 sec Apnoeic Does he need resp support?	ISBAR handover Transfer of leadership & re-allocation of roles Good use of ward staff Consider CPAP or intubation Volume 10ml/kg NSaline Antibiotics-fluclox/gent Consider IV caffeine Set up to intubate (organise resources) Organise PICU bed

SpO2 ↑ to 94% with bag 7 mask ventilation, fall again if stop bagging
HR 160/min, RR reflects bag & mask rate

Progression Poor:

CUES:	**Ideal Management:**
PROMPTS:	Bag & mask respiratory support
Poorly perfused	Volume
Worsening cap refill (>6sec)	Ensures help is coming- MET called
Apnoeic (RR 0)	
Does he need resp support?	Commence CPR (if HR < 60/min)
	Discuss intubation
HR ↓85- goes 55 if no IPPV applied	Consider Antibiotics -fluclox/gent
Ensures MET called	

If progression Good:
SpO2 ↑ to 94% in 6L/min, fall again if stop bagging
HR 130/min, RR reflects bag & mask rate

Scenario ceases after 10 minutes or applying respiratory support, received adequate handover, and communicates with family & senior staff.

Resources:

Gases: **(i) Respiratory acidosis, (ii) slightly improved gas post intubation if scenario proceeds that far**

Radiology: **Xray/CXR/over distended lungs-perihilar thickening**

Clinical Practice Guideline: RCH guideline-Bronchiolitis/Acute Management