

CRUMPET Scenario 3 : Bronchiolitis

Learning Objectives :

Technical Skills

- Recognition of signs of respiratory distress in a young baby
- Recognition and Management of cardiac arrest in a baby

Non Technical Skills (EmNTS)

- Effective team working and communication
- Task management and prioritisation of jobs
- Appropriate communication with parents

EM Curriculum Mapping :

- PMP3 Cardiorespiratory Arrest
 - PMP5 The shocked child
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Faculty Roles / Responsibilities :

[Minimum Faculty = 4]

Simulation Room :

Nursery Nurse Information in script

Student nurse (with microphone)

- Expert in equipment,
- Limited clinical experience.
- Able to undertake observations if asked.
- Only proactive if needs to be.
- Guided by control room.

Control Room:

Phone faculty

Switchboard : helpful and cheerful. Will contact whoever via bleep / mobile phone

Laboratory : Lab technician will answer phone and take request for urgent bloods. Needs patients name and DOB. Results will be phoned back

Consultants (ED / Anaesthesia / Paediatrics) – at home on call. Will give advice as needed and will come in to hospital immediately if asked with a timeframe 15-20 minutes

Senior Nurse - present in the department - available for advice over the phone if needed

Candidates :

1 ED ST 1/2
1 ED ST4+

2 ED Nurses

1 Anaesthesia ST 1/2
1 Anaesthesia ST 3+

1 Operating Department Practitioner (ODP)

1 Paediatric ST 1/2
1 Paediatric ST 3+

1 Paediatric Nurse (optional)

Mannikin Preparation :

Baby Simulator (eg) SIM Baby in a cot / ED trolley
Clothed
No iv access

Sim Room set up :

ED Paediatric Resus bay. Full monitoring available.
All drugs / fluids available (see props list for course)
Observation chart
ED drug chart
Algorithms for management of Paed Emergencies

Scenario Background :**Emily McKenzie**

Emily is 6 months old and normally fit and healthy. She has been 'snuffly' and off her feeds over the weekend (told to nurse by mother). Over the course of the morning she has become more pale and mottled and not interacting as usual, with a more audible wheeze.

Nursery spoke to her mother who is stuck in London and was panicking and told them to bring her to the Emergency Department

Scenario start :

Candidates in simulation room :

1 ED ST 1/2 1 ED Nurse
1 ED ST4+

or can be run with whole team at start

On arrival (technical programming)

A : maintained spontaneously. Not tolerating Gudel airway - audible wheeze
B : RR 80. Air entry reduced, bilateral significant wheeze. SaO₂ 100% on Oxygen
C : Pulse 175, CRT < 2 sec. BP unrecordable
D : PERL 3mm. Hypotonic , AV P U
E : No rash, no sign of trauma

Expected Responses during the scenario :

Calculations (Weight = 8kg)
IV access. BM (8.2)
FBC, UE, glucose, CRP, Ca, Mg, blood cultures
Maintenance or fluid bolus 20ml/kg (=160ml)
CXR
Obtain complete history from nursery nurse and also mother

Progression of Scenario and treatments required :

The more the baby is handled - the more exhausted and obtunded she becomes (more bradycardic & hypoxic, obstructed airway).

- ▶ Will need a jaw thrust and insertion OP airway to maintain airway

Once OP airway inserted within next 10 seconds - baby suffers cardiac arrest (vagal stimulation)

- ▶ 2222 call (unless full team already present) and full APLS cardiac arrest protocol to be followed
 - ▶ 2 cycles of CPR then ROSC but unresponsive and not breathing spontaneously
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Expected Additional Measures :

Call anaesthetic team early for obtunded child

ABG

Appropriate explanation to nursery nurse / parent

Discuss case with PICU / Paediatric Retrieval Team

Outcome

Emily is transferred to PICU where she tests positive for RSV bronchiolitis. She is treated and is kept asleep for 4 days and then extubated with no problems.

Briefing Sheet

Scenario start :

Candidates in simulation room :

1 ED ST 1/2 1 ED Nurse
1 ED ST4+

Can be run with whole resuscitation team present

Initial Briefing Notes to ED Team (to be read out)

Emily is 6 months old and normally fit and healthy. The history from the nursery nurse is that apparently she has been snuffly and off her feeds over the weekend.

Over the course of the morning she has become more pale and mottled and not interacting as usual, with a more audible wheeze.

Nursery spoke to her mother who is stuck in London and was panicking and told them to bring her to A+E

Briefing Sheet

Nursey Nurse

Emily is under your care at Tiny Tots Nursery. She has started with a cold a couple of days ago and off her feed. Her mother told you that this morning. She seemed fine otherwise.

Over the course of the morning - she has become more 'floppy' and not interacting. Around 1200 she became very pale and her breathing started to get worse and you can hear a wheeze from her chest.

You have called the mother (who is in London for the day) and she said to take her to the hospital and that her husband would attend as soon as he can be contacted.

Blood Results :**U&E**

Emily McKenzie	
Na	136
K	4.7
Urea	15.3
Creatinine	90

Venous BG

Emily Mckenzie	
pH	7.29
PO2	3.3
PCO2	6.4
BE	-8.5

FBC

Emily McKenzie	
Hb	14.8
WCC	13.5
PLT	357

Other Tests :

CRP 140

Mg²⁺ 0.82

Glucose 8.0

Calcium 2.1

CXR : Not done in the scenario