

Sick child from COVID-19 family, 7 months old

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Learning goals

1. Identify irregularities in patient status and treat according to best practice.
2. Infection transmission prevention in emergency situations
3. Collaboration, with clear leadership, in order to treat the patient.

Scenario chain of events

Child has been sick for 3 ½ days. Fever, blocked nose, coughing and lethargic. Temperature taken at 03:00 measured 39.5°. Control reading taken some 5 hours later measured 40.8°

While his parents give him a little to drink, he quickly becomes unwell: «fixed gaze, slipping in/out of consciousness». Mother calls emergency.

Ambulance dispatched with message: «Sick child, corona infection in the family»

Ambulance crew alerts back:

«Sick child, fixed gaze, breathing poorly, SaO₂ 50%» Bag-mask ventilated by ambulance crew.

Description of patient for facilitator/stand-in

Standardized Patient/Trained colleague accompanies child as “Anxious and worried mother/father”

BEFORE ARRIVING AT A&E (BRIEFING TO A&E TEAM):

Child’s breathing superficial, periodic normal breathing, gurgling respiration.

EXPECTED TREATMENT AT A&E:

Bag-mask ventilated to maintain sufficient oxygen.

Treatment/further action:

- Paracetamol 125mg rectally
- Cefotaxime 550mg iv, (or other alternate sepsis treatment)
- Intravenous access (PVC)
- X-ray of thorax at A&E
- Blood test at A&E
- Intubation

Participant briefing

You will now carry out a simulation of receiving a sick child in the trauma bay/A&E. You will use the equipment found at trauma bay area for pediatric treatment.

Simulation type (child, adult, standard patient/stand-in)

Sim newborn, SimPad + monitor

Primary simulator/patient indicators

AIRWAY	Open airway
BREATHING	Superficial, periodic normal breathing SatO ₂ : 50%
CIRCULATION	Pulse 120 Capillary filling time 5 seconds.
DISABILITY	Reduced awareness, «fixed gaze»
OTHER	Temp 40.8° Blood sugar 3.5

Changes to simulator indicators during treatment (correct / incorrect treatment...)

SpO₂ saturation up to 85% when child is ventilated with appropriate oxygen amount

First attempt at PVC insertion failed, poor circulation. Successful second attempt or with intraosseous needle.

Pulse decreases to 110 and capillary filling time 3 seconds after child receives appropriate intravenous fluids (type/amount)

- If the child doesn't receive intravenous fluids, pulse decreases by 50 or more

O₂ saturation after intubation 90-95%.

- If no intubation, saturation falls to 80%

OTHER:

Temperature 39° if child has received paracetamol in the ambulance

Regarding questions about blood test or arterial blood gas results during the case, test results are not available yet

If an X-ray of the thorax is taken during the case, bilateral pulmonary opaque patches are (try to obtain appropriate X-ray picture for decision making).