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Paediatric Respiratory Distress and Oxygen Assessment

Practical 05 / Skills laboratory simulation

Aim

Recognise severe respiratory signs and demonstrate selecting and monitoring an oxygen delivery device.

Principle

Work of breathing, oxygen saturation, mental state and response to support determine the urgency of assessment. Device and flow selection depend on the child and facility protocol.

Materials and Requirements

- Child manikin, age-specific observation chart and oxygen training setup
- Pulse oximeter, nasal cannula, mask and fictional facility guideline

Procedure

1. Call for help when signs suggest severe illness. Observe airway sounds, chest movement and ability to vocalise or feed. Assess respiratory rate, grunting, retractions and colour.
2. Assess overall appearance, airway patency, ability to cry or speak and life-threatening signs. Call for team support and avoid unnecessary distress during observations.
3. Measure saturation with a suitable probe and check signal quality alongside clinical findings. Record whether the child is on room air or oxygen.
4. Count respirations with the child settled where possible. Fit the correct probe on a suitable site and compare displayed pulse with the observed pulse before accepting a low signal.

Continue with step 5 on the next page.

Procedure Continued

Paediatric Respiratory Distress and Oxygen Assessment

5. Choose the device, flow and target in the simulation guideline for the stated age, findings and scenario. Ask the instructor to confirm the setting.
6. Identify the device appropriate to the simulation and check interface size and function. Verify the authorised oxygen target and settings from the age-specific pathway.
7. Demonstrate fitting the device and check oxygen source and tubing. Reassess saturation trend, work of breathing and mental state.
8. Fit the device and reassess saturation, respiratory effort, colour and alertness promptly. Record the time, setting and response together and investigate absent improvement.
9. Update the team if findings persist or worsen and state the next escalation.
10. Give an update describing initial and current observations and the support provided. Rehearse escalation for worsening fatigue, poor ventilation or persistent hypoxaemia.

Precautions

- Avoid delays in calling for help while obtaining a perfect oximeter trace.
- Demonstrate equipment use on a trainer and use a protocol for patient care.

Observations and Interpretation

Paediatric Respiratory Distress and Oxygen Assessment

Observations and Record

Item	What to record	What it tells you
Respiratory effort	Rate, retractions, grunting and chest movement	Grades respiratory distress
Oxygenation	Saturation trend with device and signal context	Assesses the response
Reassessment	Effort, mental state and team update	Detects fatigue or deterioration

Worked Example

A small child has grunting, marked lower chest indrawing and a reliable room-air reading of 86%. The team starts protocol-directed oxygen and calls for urgent paediatric review.

Result and Interpretation

The findings indicate severe respiratory distress with hypoxaemia. Repeat clinical assessment after starting support and escalate persistent deterioration.

Viva Questions and Answers

Can a normal saturation alone exclude respiratory failure?

No. The child's effort, fatigue, mental state and ventilation still require assessment.

What makes comparison of two readings meaningful?

Knowing the signal quality, timing and oxygen support for both.

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