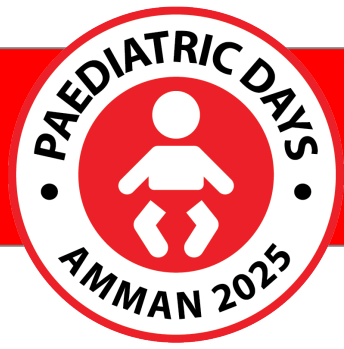




PAEDIATRIC LEARNING HUB



A blended learning programme



Concept

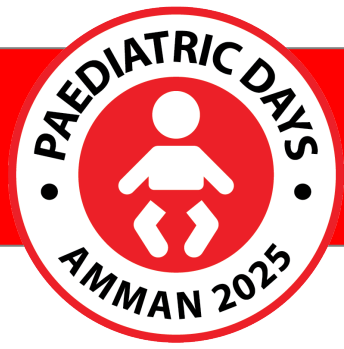
- 10 independent modules
- Based on the **MSF's Intersectional Paediatric Care: Clinical and Therapeutic Guidelines** (2024 edition)

Online self-paced courses



Ready to use face-to-face training packages





TEMBO: online self-paced courses

PAEDIATRIC RESPIRATORY CONDITIONS





TEMBO: online self-paced courses

Step 1

Evaluate the airway and breathing and identify respiratory distress following the ABCDE emergency approach!



If not breathing: **CALL FOR HELP**

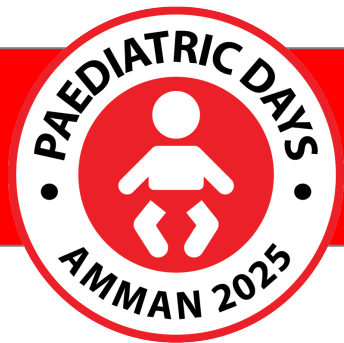
	EVALUATION: AB	MANAGEMENT
A irway (A) 	<input type="checkbox"/> Check airway for obstructions	<input type="checkbox"/> Open and clear the airway: <ul style="list-style-type: none">• Neutral position for children <1 year• Sniffing position for children >1 year <input type="checkbox"/> Carefully remove any obvious airway obstruction (e.g., visible foreign body, suction secretion carefully if needed) <input type="checkbox"/> Insert oropharyngeal airway if necessary (unconscious child with no gag reflex)
B reathing (B) 	<input type="checkbox"/> Check respiratory rate (RR) and oxygen saturation (SpO₂) <input type="checkbox"/> Check for signs of respiratory distress/failure: <ul style="list-style-type: none">• ↑ respiratory effort - nasal flaring, retractions, head bobbing, grunting• Abnormal RR - too fast or too slow• Inefficient breathing - shallow, irregular or with decreased chest expansion• Decreased air entry on auscultation• Hypoxia - visible cyanosis or SpO₂ <94%	<input type="checkbox"/> If not breathing begin bag mask ventilation with oxygen attached <input type="checkbox"/> Administer high flow oxygen >6 L/min (use non-rebreathing mask if available), goal SpO ₂ of >94% <input type="checkbox"/> Identify and treat any critical condition linked to breathing (e.g. pneumothorax)

How would you
Choose the correct



Her vita


On auscultation there is good air e
bit pale, no blue lips or fingernails.



Face-to-face training packages

- Crackles/crepitations/rales
- Grunting

Gasping (pre-terminal sign)

 **Note:** gasping is non-effective breathing and a pre-terminal sign making bag mask-ventilation necessary.

Ask learners:

4 min

How can we determine the respiratory rate?

- Let one learner explain, add and correct if necessary
- Next, they will have to **count silently** and individually **for themselves** the respiratory rate from a child
- Show video on *slide 5* and let them practice counting
- Compare results afterwards – RR is around 60/min

Explain learners:

2 min

There are different respiratory or breathing patterns. This is how the physiological breathing pattern looks like:

- Explain physiological breathing pattern and draw on flip chart/whiteboard:



Ask learners:

2 min

What is Kussmaul breathing? When and why does it occur?

- **Deep, labored breathing**, often associated with severe metabolic acidosis, “respiratory compensation” of a **metabolic acidoses** (reduction of CO₂ in the blood due to increased rate or depth of respiration). Draw on flip chart/whiteboard:





Face-to-face training packages

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Diagnostic features	Management	Features of severity
Rummy nose Flour appetite Fever Coughing Mild wheezes bilaterally Temperature 38.0/38°C Clear secretions in nose Bilateral crepitations	Give paracetamol if the child had a fever and appeared unwell! Lots of oral fluids 2L/min oxygen via nasal cannula Maintenance IV fluids D5W/1% Stop feeding One dose of salbutamol Keep pulse oximeter on the baby continuously Regular nasal suctioning Feeding every 2 hours only very small amount SB baby up before and after feeding The fluids have been reduced to 2/3 of usual maintenance IV fluids	Refusing to feed He stopped breathing for a few seconds... He did this again while she was walking to the hospital (frequent apnoea) SpO ₂ 8% on room air Grunting, intercostal and subcostal retractions (respiratory distress)

27 Case study Fatema

28 Case study Fatema

Fatema is a 4-year-old girl. Her mother tells you she has had a cough and fever:

A RR 63/min SpO ₂ 8% and cyanotic in room air Grunting Retractions (subcostal, subcostal)	
C HR 120 bpm Pulse strong, CRT < 2 sec, lower limbs without temperature gradient No signs of dehydration Conjunctiva pale	
D AVPU = A, but irritable	
E Temperature 39.4°C	Weight = 14.8 kg, MUAC 138 mm

29 Case study Fatema

Calculate Asim's CRS

Asim:

- 3 years old
- RR of 38/min 1
- severe wheezing 2
- severe intercostal and subcostal retractions
- nasal flaring 2
- lethargic 2
- SpO₂ is 91% 1
- pale 1

Total 9
→ severe respiratory distress

Could you tell me the CRS of Asim?
3-year-old Asim has a RR of 38/min, severe wheezina and severe intercostal and subcostal

Slide 22 of 39 English (United Kingdom) Accessibility: Investigate

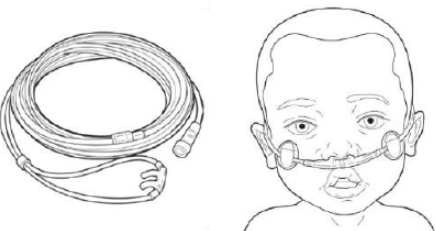
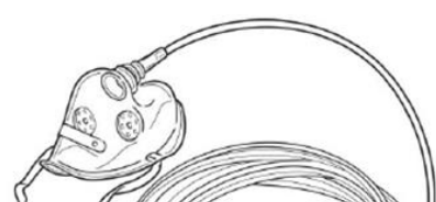
Notes 59%



Face-to-face training packages

Oxygen delivery cards

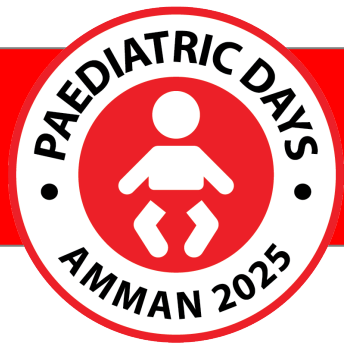
- cut along the black lines: you will have 3 pictures and 14 statements
- laminate if possible
- 3 sets needed

	Nasal Cannula.
	Preferred method of delivery.
	Patients with spontaneous breathing. Start with 1 - 2L/min and adjust according to SpO ₂ .
	Do not exceed 2 L/min in infants and 4 L/min in children for standard flow rates.
	Delivers 24 – 35 % oxygen.
	Simple oxygen mask.
	Used for patients with spontaneous breathing and respiratory distress when the oxygen provided via nasal cannula is not sufficient or

Resources required

Material	Digital documents/soft copies	Printed documents/hard copies
Laptop	ppt "Respiratory conditions"	Oxygen delivery cards (3 sets)
Projector		Respiratory cases cards (2 sets)
Speaker		Case Ibrahim (1 per learner)
Post-its		Respiratory job aids (2-4 each: 1 of each per table)
Flip chart or whiteboard and markers	Paediatric guidelines: one per table or digital 1 per 1-2 learners (on phone or laptop or tablet...)	





Face-to-face training packages

Session Plan

Respiratory Conditions			
Topic	Methodology	Recourses required	Time
Introduction: <i>only if appropriate</i> <ul style="list-style-type: none"> presentation of facilitator and learners team principles - OPTIONAL -	Interactive group work 	<ul style="list-style-type: none"> Laptop and projector Flip chart/whiteboard and markers 	27 min
Objectives	Presentation 	<ul style="list-style-type: none"> Laptop and projector OR Flip chart/whiteboard and markers 	3 min
Approach to a child with respiratory complaints			2 hrs 5 min
<ul style="list-style-type: none"> Respiratory distress 	Exercise + ppt 	<ul style="list-style-type: none"> Laptop, projector and speakers ppt "Respiratory conditions" 	40 min
<ul style="list-style-type: none"> A/B from the ABCDE emergency approach 	Exercise 	<ul style="list-style-type: none"> Post-its Flip chart/whiteboard and markers 	15 min
BREAK			5 min
<ul style="list-style-type: none"> Clinical Respiratory score (CRS) 	Presentation 	<ul style="list-style-type: none"> Laptop and projector ppt "Respiratory conditions" 	15 min
<ul style="list-style-type: none"> Oxygen delivery 	Discussion and interactive group work 	<ul style="list-style-type: none"> Oxygen delivery cards (x3) Laptop and projector ppt "Respiratory conditions" Flip chart/whiteboard and markers 	25 min
<ul style="list-style-type: none"> Respiratory distress - differentials 	Exercise 	<ul style="list-style-type: none"> Flip chart/whiteboard and markers Post-its 	25 min
Break 30 minutes or stop here if you deliver the module on 2 days!			
Assessment, treatment and management of specific conditions			2 hrs 10 min
<ul style="list-style-type: none"> Respiratory cases 	Exercise 	<ul style="list-style-type: none"> Respiratory cases cards (2 sets) 	30 min
<ul style="list-style-type: none"> Bronchiolitis 		<ul style="list-style-type: none"> Laptop and projector ppt "Respiratory conditions" 	30 min
BREAK			5 min

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PAEDIATRIC LEARNING HUB



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^ Respiratory Conditions

The Respiratory Conditions module covers key topics including **respiratory assessment**, **oxygen delivery**, **differential diagnosis**, and common respiratory conditions such as **pneumonia**, **bronchiolitis**, and **asthma**.

Click on the icons to access the content.

Online Self-Paced



You'll be taken to the course page and asked to enrol. No enrolment key or additional information is required.

Face-to-face Package



An MSF email address is required to access the link. This teaching material is intended to be used by an experienced paediatrician or senior doctor with paediatric expertise.

PAEDIATRIC RESPIRATORY CONDITIONS



00:02.28

