

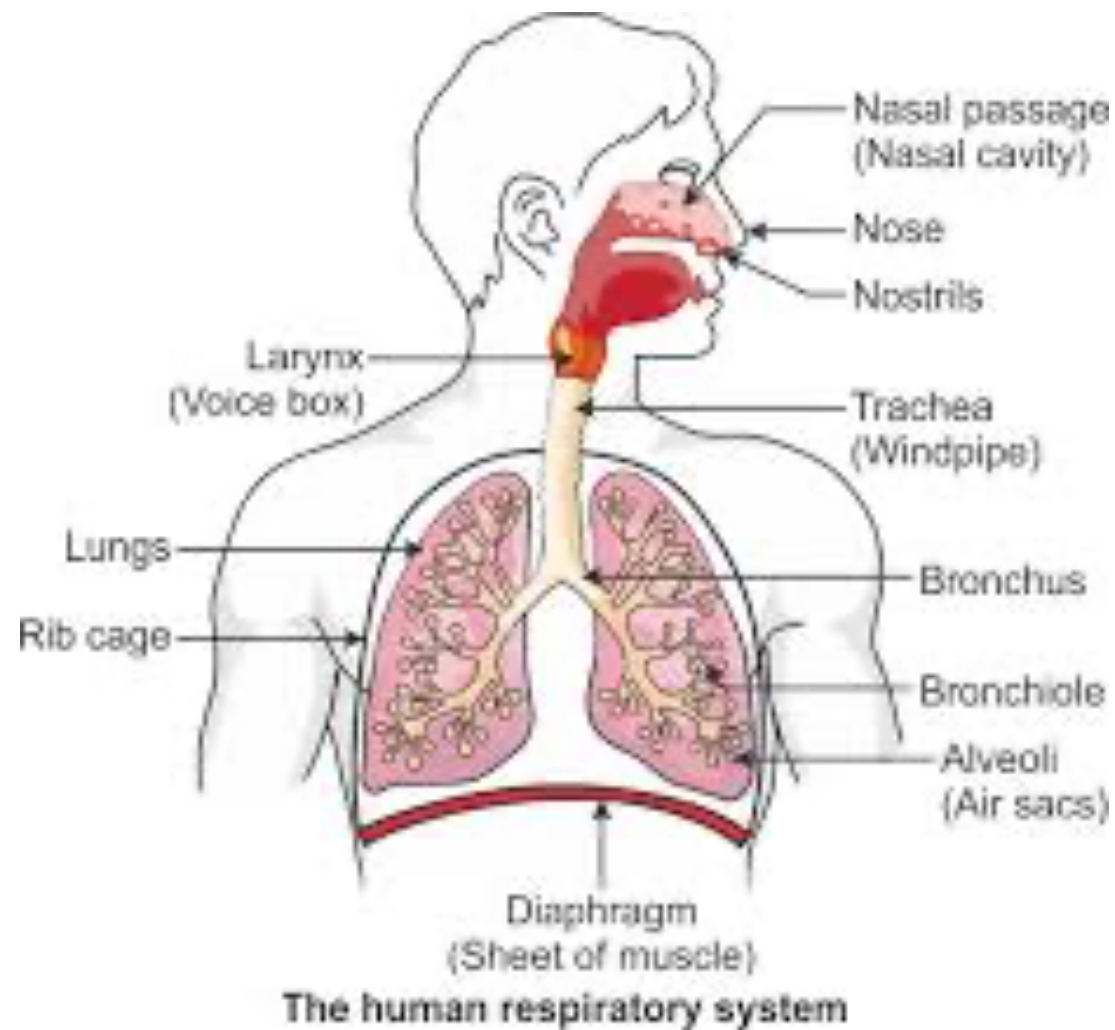
How to care for a service user with a respiratory illness

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Overview of the session

1. Brief overview of respiratory system
2. Respiratory conditions
3. Care of service users with respiratory conditions
4. Oxygen therapy

The respiratory system



Covid 19 – corona virus

- World Health Organisation – about 80% of cases recover without any specialist treatment.
- Spread by droplet infection.
- ‘Flu like’ symptoms.
- High temperature and new persistent cough.
- Pneumonia is a serious complication.

Other problems affecting the lungs

Acute

- Asthma
- Pneumothorax (collapsed lung)
- Infections e.g. pneumonia
- Trauma

Longer term

- Lung cancer
- Chronic obstructive airways disease (COPD)
- Smoking
- Industrial/occupational diseases

Common presentation

- Breathless at rest and/or on exertion
- Cough ? Productive, dry
- Noisy breathing e.g. wheezy, rattles
- Using accessory muscles
- Cyanosed – late and very serious sign
- New or increased confusion
- Agitated / restless/ anxious/ scared
- Respiratory rate increased, raised pulse & reduced oxygen (O₂) saturations
- High temperature and new persistent cough
- Ask and listen to how they are feeling

Red flags

- New confusion or drowsiness
- Unable to talk in a full sentence
- Needing increasing levels of oxygen to maintain saturations
- Rapidly deteriorating MEWS score
- Becoming short of breath on minimal exertion
- If in doubt start 15L o2 via NRB mask and call an ambulance

Care

- Use ILS training – think ABCDE
- FULL MEWS paying attention to respiratory rate (time for full minute), pulse & O₂ saturation - has it altered from the baseline?
- If sats below 96% and below the individuals baseline commence oxygen 15 litres via the non re breath mask
- Monitor O₂ saturation continuously or as frequent as possible initially – looking for improvement or deterioration.
- Inform medical staff - use SBAR

Longer Term Care

- Repeat MEWS as per medical advice
- Give any prescribed medications i.e. inhalers
- Encourage oral fluids if tolerated
- Paracetamol as prescribed if fever present
- Follow medical advice, ensure O₂ prescribed by Dr
- Use clinical judgement; discuss concerns regarding management with medical team
- Provide tissues if expectorating, encourage hand washing
- Keep your patient sat upright- use pillows
- *NB if unable to record O₂ saturation levels – act according to clinical presentation*

Oxygen is a drug and should be prescribed except in emergencies

- Oxygen should be regarded as a drug (BNF 2017)
- Oxygen must be prescribed in all situations (except for the immediate management of critical illness in accordance with BTS guidelines) (NPSA Oct 2009)
- Oxygen should be prescribed to achieve a target saturation (SpO₂) which should be written on the drug chart (BTS 2017)

Normal oxygen saturation range in healthy adults

SpO₂ = **S**aturation (measured by **p**ulse oximetry) of **O₂**

HEALTHY ADULTS - Daytime

SpO₂ = 96-98%

COPD

SpO₂ = 88-92%

- ***Transient dips in saturation are common during sleep***
 - ***KNOW YOUR PATIENTS***

Aims of emergency oxygen therapy

- To correct or prevent potentially harmful hypoxaemia (abnormally low levels of O₂ in the blood)
- To alleviate/reduce breathlessness (only if hypoxaemic)

Oxygen has no effect on breathlessness if the oxygen saturation is normal e.g. in a panic attack

Prescribing to a Target Saturation range

1. O₂ will be prescribed in order to keep SpO₂ within a specified range for individual patients
2. Target oxygen saturation prescription integrated into patient drug chart and monitoring
3. Oxygen delivery device and flow administered should be changed if necessary to keep the SpO₂ in the target range



When to start oxygen therapy

- ✓ **If sats below baseline for the individual and MEWS increased from individuals baseline.**
- ✓ **Use ILS training – think ABCDE and if you have concerns commence oxygen via non-rebreathe mask @15 litres and call doctor or ambulance.**

Oxygen Cylinder Set Up



2.3 Make sure the contents gauge is in the green zone. This indicates that the cylinder is FULL.



2.4 Remove the tamper evident handwheel cover by pulling the tear ring. Discard the cover into the recycle bin. If the cylinder has been used before this cover will not be present.



2.6 Remove the valve outlet cover. i) The hinged grey cover is pulled down. Do not remove the grey cover and refit after use.



2.7 Attach tubing from mask or nasal cannula to the valve outlet. Ensure the tubing is pushed on securely.



2.7 Ensure the flow selector on top of the cylinder is set to zero and the hand wheel is turned off before connecting equipment.



2.8 Slowly turn on the cylinder by rotating the hand wheel anticlockwise until it comes to a complete stop. Do not use excessive force.



2.9 Set the prescribed flow by rotating the dial flow selector. Ensure that the correct flow rate number is clearly visible in the flow selector window. Check the gas is flowing.



Is essential to check regularly the oxygen level in the cylinder (every time MEWS are recorded)

Failure to do this could result in serious harm

- failure to provide therapeutic oxygen as prescribed
- potential for patient to be suffocated by a mask without oxygen running

High Concentration Non-rebreathe Mask (NRB)



- Use in critical illness/trauma
- Post-cardiac or respiratory arrest
- Delivers O₂ concentrations of 60- 80% or above (flow meter must be set at 15 litres)
- Effective for short term treatment until Doctor can review
- This is the mask in the Grab Bag

Once reviewed by doctor

- ✓ **Oxygen therapy will be prescribed**
- ✓ **Step down from non-rebreathe to venturi mask as soon as possible**
- ✓ **Aim to keep sats in the range outlined by the doctor.**
- ✓ **Need to titrate to specific needs i.e. if using 24% and sats drop below range then you would need to increase it to 28 %.**
- ✓ **Call doctor if sats not improving or needing 40% o₂.**

How should oxygen be prescribed?

- 1. Percentage e.g. 24% (Not 4 litres)**
- 2. Delivery device e.g. nasal cannulae**
- 3. Target O₂ sats e.g. 96-98%**
- 4. Duration e.g. continuous until reviewed**

Venturi or Fixed Performance Masks (V)



Aims to deliver constant oxygen concentration within and between breaths

Good masks for patients with COPD

(patients with a target SpO₂ of 88-92%)

Blue = 24% @ 2 litres

White = 28% @ 4 litres

Yellow = 35% @ 8 litres

Red = 40% @ 8 litres

Green = 60% @ 15 litres

Nasal Cannulae



- Recommended for most people on long term/intermittent O₂ therapy
- 2-6L/min gives approx. 24-50%
- Comfortable and easily tolerated
- No re-breathing
- Can eat/drink/talk
- Preferred by patients (*Vs simple mask*)

In Summary.....

- Oxygen is a drug & should be prescribed (except in emergencies) with a target saturation
- Sick and deteriorating service users must not go without oxygen while waiting for a medical review or paramedics
- In an emergency, use a Non-rebreathe mask with O₂ @15litres
- Sick and deteriorating service users with COPD must receive O₂, with a target saturation of 88-92%.
- It is your responsibility to familiarise yourself with the O₂ delivery devices and O₂ cylinders available in your area of work

Summary

- Reassure
- MEWS and fluid balance chart where clinically indicated
- O2 if required –(prescribed)
- Promote and assist with healthy fluid intake & monitor
- Communicate with medical staff regularly and agree plan of action.
- Involve Physical health team - or other more experienced staff if unsure. Ask for help.
- Discuss vulnerable patients at handover
- Document all actions on Paris

Summary cont.....

- Know your service users – anyone at particular risk.
- Find out where your stock of supplies and oxygen are stored.
- Know who is there for support if you feel out of your depth.
- Keep calm – but act with urgency.
Ask for help if you need it.

Physical Health Team

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Resuscitation Team

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