

Supplementary materials

Assessment of Doctors' and Nurses' Knowledge of Acute Oxygen Therapy

INFORMATION SHEET

PURPOSE OF THE STUDY

The purpose of the study is primarily to determine knowledge of oxygen therapy in among doctors' and nurses'. This study will enable the researchers to obtain a baseline data in formulating oxygen protocols for the hospital.

WHAT IS EXPECTED OF YOU IF YOU AGREE TO PARTICIPATE

It is expected that those who agree to participate will fill a questionnaire on knowledge of oxygen therapy for 10-15 minutes. The cost of investigations would be borne solely by the researchers and at NO TIME would the patients be required to pay for any tests involved in this study.

YOUR PARTICIPATION IS VOLUNTARY- Your participation is voluntary, and you may withdraw at any phase of the study.

CONFIDENTIALITY -We will treat information collected from you in absolute confidence. No part or whole of such information shall be divulged to anybody except the investigators. We owe it a duty to keep your records secret.

BENEFIT OF PARTICIPATION

Your participation from this study will contribute to clinical practice improvement and patient care. I at this moment consent to participate in the above-stated study as explained to me and I am also aware that I have the right to withdraw my participation at any point during the study if I so wish. Signature _____ Date _____

Please select one answer the by ticking the box and filling the line.

SECTION 1: DOCTOR AND NURSE CHARACTERISTICS

1. How old are you (at last birthday in years)? _____
2. What is your gender? Male Female
3. Department where you currently work _____ Unit/Ward _____ (if applicable)
4. What is your profession? Doctor Nurse Other
5. Do you have additional qualification aside MBBS/RN? Yes No (If Yes Specify) _____.
6. How many years have you practice after graduation? _____.
7. What is your current position/Job designation? _____.
8. How long have you been working in this hospital or health facility? _____ .
9. How long ago did you administer oxygen to a patient? <1month 1-6 months >6 months
10. How long ago did you prescribe oxygen to a patient? <1month 1-6 months >6 months

SECTION 2: RELEVANT EDUCATIONAL BACKGROUND

11. Aside from the undergraduate or basic professional training, have you received any CME/ update/ special training on oxygen therapy? Yes No
12. If yes to question 11, what year did you receive the update/training? _____ .
13. What are your major sources of information on the oxygen therapy? (circle response please)
- a) Medical/Nursing training
 - b) Post qualification /in-service training
 - c) Colleagues
 - d) Journals
 - e) Print & electronic media
 - f) Others (specify) _____ .

SECTION 3: AWARENESS AND USE OF OXYGEN THERAPY GUIDELINE

14. Are you aware of WHO / Any other guideline on Oxygen Therapy? Yes No if no go to question 17
15. Have you ever read it? Yes No
16. Have you ever used or applied it your practice? Yes No

SECTION 4: GENERAL KNOWLEDGE OF MEDICAL OXYGEN.

17. Oxygen is like any other medication True False Don't know
18. Oxygen is not medication but a supportive therapy True False Don't know
19. Oxygen should only be given after doctors' prescription True False Don't know
20. Oxygen promotes combustion True False Don't know

SECTION 5: RECOGNISING HYPOXAEMIA

21. Hypoxaemia can be recognized by clinical signs True False Don't know
22. Blood Gas Analysis is useful for confirming hypoxaemia True False Don't know
23. Breathlessness is not always a sign of hypoxaemia True False Don't know
24. Pulse oximetry is useful in detecting and monitoring hypoxaemia True False Don't know
25. SpO2 level < 90 % in adults define hypoxaemia True False Don't know

SECTION 6: INDICATIONS FOR ACUTE OXYGEN

Indications for Acute Oxygen Therapy include

26. Central Cyanosis True False Don't know
27. Asymptomatic Anaemia True False Don't know
28. Eclampsia True False Don't know
29. Restlessness and Convulsion in children True False Don't know

Please select one answer by circling either letter a, b, or c

SECTION 7: OXYGEN PRESCRIPTION

30. Which of the following should be documented in the treatment (prescription) chart of a patient receiving oxygen?
- a) Oxygen Volume
 - b) Oxygen Flow Rate or FiO₂
 - c) Oxygen Diffusion Rate
 - d) Don't know
31. Which of the following should be documented in the treatment (prescription) chart of a patient receiving oxygen?
- a) Oxygen Solubility
 - b) Oxygen Source and Delivery Device
 - c) Oxygen Density
 - d) Don't know
32. Which of the following should be documented in the treatment (prescription) chart of a patient receiving oxygen?
- a) Oxygen Odour
 - b) Frequency of Administration
 - c) Oxygen and Nitrogen Concentration
 - d) Don't know
33. Which of the following statement on the prescription of oxygen and delivery is correct?
- a) Nasal catheter oxygen flow rate >5L/min lead to rebreathing of CO₂
 - b) Oxygen prescription should be to a target saturation range rather than a fixed dose
 - c) Oxygen concentrator delivers maximum oxygen concentration of 70%
 - d) Don't know

SECTION 8: OXYGEN DELIVERY PRACTICES

34. A 72-year-old farmer with COPD has carbon dioxide retention (type II respiratory failure), which of this device is appropriate for oxygen delivery to achieve a target saturation of 88-92%?
- a) Nasal catheter at 1-2 L/min/ in the absence of Venturi masks
 - b) Nasal catheter at 16 L/min
 - c) Oxygen mask with reservoir 6-9L/min
 - d) Don't know

35. A 12-year-old boy had type 1 respiratory failure, select one correct initial concentration of oxygen to achieve a target saturation of 94-98%.

- a) FiO₂ of 60%
- b) FiO₂ of 20%
- c) FiO₂ of 150%
- d) Don't know

36. Humidification is essential for patients receiving oxygen through one the following device:

- a) Endotracheal tube or a tracheostomy
- b) Nasal Prong
- c) Oxygen mask
- d) Don't know

37. Regarding weaning and discontinuation of oxygen which of the following statement is true?

- a) Weaning and discontinuation of oxygen therapy should be started if clinically stable on low-dose oxygen
- b) Weaning and discontinuation of oxygen therapy should be commenced after a new chest radiograph is normal
- c) Weaning of oxygen therapy should be initiated if clinically stable on high-dose oxygen
- d) Don't know

What are the major challenges of oxygen administration in the hospital ward and emergency room?

1

2

3

Thank you

Scoring of question items and Sources of References

Question	Correct Answers	Sources in the literature
17.	T	Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:798 O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi10.
18.	F	Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:798 O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi10
19.	F	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi3
20.	T	Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:801
21.	T	World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.5
22.	T	Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:801 World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.5 and pp.18
23.	T	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi10
24.	T	World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.5
25.	T	Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:799 World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.18-19
26.	T	World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.43
27.	F	World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.43
28.	T	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi43
29.	T	World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.43
30.	B	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi55-58
31.	B	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi55-58
32.	B	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi55-58
33.	B	World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.47 O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi55-58
34.	A	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi52 World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.47
35.	A	Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:799
36.	A	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi52 Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:801 World Health Organization 2011. Ed Trevor D. The clinical use of oxygen in hospitals with limited resources: Guidelines for healthcare workers, hospital engineers and managers pp.65-67
37.	A	O'Driscoll BR, et al; BTS guideline for emergency oxygen use in adult patients. Thorax 2008;63(Suppl 6):vi60 Bateman NT, et la. ABC of oxygen: acute oxygen therapy.BMJ. 1998; 317:801

Bloom's cut-off point:

Good knowledge score between 80-100% (≥ 17 out of maximum of 21)

Moderate knowledge score between 60 -79% (≥ 13 out of maximum of 21)

Poor knowledge score $<60\%$ (≤ 12 out of maximum of 21)

Data entry

Code on entry to data sheet

Yes- 1 No -2 Don't know -3

True- 1 False -2 Don't know -3

a)-1, b)-2, c)-3 d)-4 e)-5 f)-6

Recode before analysis

Correct answer - 1 and wrong answer- 0