



Competencies on Breathing Assessment

PACU Breathing Learning and Teaching Resource

©BARNA.2021

Competencies : Breathing Assessment

Core clinical learning outcomes:

Is able to critically assess the patient's breathing in the immediate post anaesthetic period in relation to:

- *Understanding how to recognise signs of normal breathing function*
- *Understanding the known risks to breathing caused by anaesthesia, surgery*
- *Demonstrating skill in observation and interpretation of abnormal [impaired, insufficient] signs of respiratory function*

	A. Normal respiratory function • <i>The novice demonstrates knowledge and understanding of normal respiratory function from whence any deviation suggests breathing insufficiency</i>
1.	Explains how to recognise normal breathing function using 'look, listen and feel' technique. Provides rationale for signs of normal breathing with reference to applied anatomy and physiology. Include the following: • Airway • Sensorium • Colour • Breathing pattern, rate, depth • Cardio-vascular status • Saturation of oxygen [SaO₂] • End tidal carbon dioxide [ETCO₂]

	B. Critical Assessment : clinical risk analysis • <i>The novice is able to explain how clinical risk analysis informs physical assessment in anticipating and pre-empting breathing complications</i>
2.	Novice identifies risk of post anaesthetic breathing complications associated with the following: • Anaesthetic drug mix used in general anaesthesia • Prolonged assisted ventilation [IPPV] • Prolonged static position on theatre table • Obesity • Underpinning lung disease • Age • Thoracic, abdominal surgery
3.	• Explains how to find additional information on patient risk and how it can inform patient assessment
	C. Is able to critically assess the patient's breathing in the immediate post anaesthetic period • <i>Novice is able to apply look, listen, feel techniques as assessment tools from patient reception until fit for discharge</i> • <i>Critically assesses patient's respiratory status using normal breathing signs as a baseline</i> • <i>Critically analyses patient's respiratory status considering respiratory risk factors that may impair respiration</i>

4.	Look : Level of Consciousness • Is able to assess LoC as a contributory factor in airway & respiratory assessment • Indication that deeply unconscious patient may have airway obstruction / respiratory depression [both] • Understanding of drug combination that may contribute to above
5.	Look : Misting on mask • Is able to recognise misting on mask [T piece] as key indicator of normal breathing • Is able to rationalise how respiratory depression may diminish misting / and find evidence for drugs which may bring about respiratory insufficiency
6.	Look : Colour • Is able to recognise the significance of colour in assessing breathing function • Is able to explain how deviation from pink colour to pallor, bluish discolouration of lips, cyanosis denotes progressive respiratory insufficiency and hypoxia
7.	Look : Saturation of Oxygen [SaO₂] • Identifies normal range of saturation of oxygen [SaO₂] • Explains why SaO₂ is a valuable real time indicator of respiratory efficiency • Identifies when falling SaO₂ values denote significant respiratory insufficiency
8.	Look : End Tidal CO₂ [EtCO₂] • Is able to identify normal range of end tidal CO₂ readings • Is able to explain how end tidal CO₂ equates to partial pressure of CO₂ in the blood • Is able to explain how slow, shallow breaths will raise end tidal CO₂ [hypoventilation] and hyperventilation will lower end tidal CO₂

9.	Look : rate and depth of breathing • Is able to identify normal rate and depth of breathing explain why this is a key indicator of breathing function • Explains how rate and depth may be affected by anaesthetic drug mix • Understands when slow, shallow breaths become a clinical problem [hypoventilation] and when to call for help
10.	Look : pattern of breathing • Is able to recognise a normal breathing pattern giving rationale • Is able to recognise abnormal breathing pattern [see saw breathing] as a sign of obstruction, breathing problem
11.	Look : use of accessory muscles • Identifies how the accessory muscles assist lung expansion in the event of respiratory incapacity • Is able to recognise the use of accessory muscles in the above complication
12.	Look : tracheal tug • Is able to describe or recognise 'tracheal tug' • Is able to explain why 'tracheal tug' is a sign of acute respiratory distress
13.	Listen : breathing sounds • is able to recognise normal quiet breathing, partially obstructed airway [snoring, gurgling, crowing, wheezing] or totally obstructed airway [silence, apnoea]. See Airway competency
14.	• is able to use a stethoscope to auscultate the lungs fields to confirm air entry

15.	Feel : for air movement • is able to demonstrate how to feel for air movement exhaled at mouth, nostrils • rationalises why this is definitive sign that airway is clear, and that the patient is breathing • is able to demonstrate how to feel for thoracic, abdominal movement to indicate breathing function
	<i>D. Understands the terms hypoxia and hypercarbia together with the implications of each</i>
16.	• Is able to explain what hypoxia is, how to recognise it and it's implications
17.	• Is able to explain what hypercarbia is, how to recognise it and it's implications