

COPD Units of Learning

<p>Title of overarching NOS: CHS 192 Perform standard tests using automated analyser CHS 24 Carry out arterial puncture and collect arterial blood</p>	<p>Unit of learning to demonstrate competence: Determine blood gas status –arterial method</p>
<p>Details of the relationship between the unit to demonstrate competence and relevant national occupational standards (if appropriate)</p>	<p>Users will be able to demonstrate competence in determining an individuals blood gas status by arterial measurements and appropriate mechanised analysis</p>
<p>Outcomes: The individual will know and understand:</p>	<p>Assessment criteria To be competent the individual will be able to:</p>
<p>Indicative Level</p>	<p>Level 1 (Expert/specialist) Level 2 (Experienced practitioner)</p>
<p>Gas transfer capacity and coefficients in symptomatic individuals with COPD and other respiratory diseases and the range of blood gas parameters, their purpose and procedures pertinent to the COPD spectrum and other respiratory diseases and progression of disease in line with your scope of practice, level of responsibility and National and local guidelines</p>	<p>Explain the rationale and frequency for undertaking arterial blood gas estimations to the individual with COPD and other respiratory diseases and briefly outline the methodology</p> <p>Clearly explain to the individual the benefits of undertaking arterial blood gas analysis and its relevance to COPD and other respiratory diseases management</p>
<p>The value, use and limitations on invasive methods to measure blood gas measurements in COPD and other respiratory diseases progression</p>	<p>Work collaboratively with the individual and professional colleagues to identify indications and contra indications for arterial blood gas analysis based on pulse oximetry screening</p>
<p>The use and contribution of arterial blood gas analysis with reference to ongoing COPD and other respiratory diseases assessment and management including an individual's resting hypoxaemia within COPD and other respiratory diseases management and subsequent desaturation of blood oxygen levels and suspected carbon dioxide retention</p>	<p>Outline the use and contribution of arterial blood gas analysis for the assessment and management of an individuals blood gas parameters</p>

How to differentiate between and identify causes of respiratory and metabolic acidosis and alkalosis for individuals with COPD and other respiratory diseases	Describe the differences and causes of respiratory and metabolic acidosis and alkalosis
The importance of checking the individuals identity and gaining valid consent	Confirm the identity and valid consent has been obtained for the procedure
Assess and monitor risk factors during arterial blood gas analysis	Describe and determine the risks associated with arterial blood collection, identifying any contra- indications and relevant actions Assess the risk to the individual which may result from arterial blood gas analysis
How to assess an individuals understanding and readiness to participate in the procedure and give reassurance throughout in a professional manner	Instruct the individual prior to and at the end of the procedure to achieve compliance Support, reassure and monitor the individual throughout the procedure Where appropriate check the required sedation for the procedure has been prescribed and administered
Health, safety and infection control measures	Apply health, safety and infection control measures during arterial blood collection and during analysis of the sample
Recognise and use the appropriate site for arterial blood collection	Select and prepare the appropriate site for arterial blood collection in accordance with local policies, protocols and national guidelines
Perform arterial blood collection using appropriate equipment and accessories	Choose the most appropriate method of sampling taking into consideration the individuals clinical status and preference Select the appropriate equipment for arterial blood collection that is suitable for arterial blood gas analysis Insert the blood collection equipment at the correct site and obtain the correct volume of arterial blood sample for blood gas analysis following agreed protocols Check for and avoid blockage of the artery and avoid any damage to the surrounding blood vessels Stop the flow of blood using sufficient pressure at the correct pressure point and for a sufficient time to ensure haemostasis

	<p>Seek remedial assistance if and when remedial action to stop arterial blood loss is required</p>
<p>Optimisation, trouble shooting and preventative maintenance, calibration and quality assurance requirements of blood gas analysis equipment</p>	<p>Select the appropriate equipment for capillary blood gas analysis</p> <p>Check the calibration and quality assurance measurements have been completed successfully for blood gas analyses</p> <p>Demonstrate an understanding of the principles of operation and procedures to reduce/eliminate errors</p> <p>Check and confirm the operational optimal performance of the equipment for blood gas analysis</p>
<p>How to effectively use the blood gas analysis equipment , the principles of operation, analysis of results, limitations and factors which may affect accuracy</p>	<p>Demonstrate effective use of the equipment throughout the procedure</p> <p>Perform arterial blood gas analysis in accordance with local protocols</p>
<p>Recording of results</p>	<p>Obtain and record acceptable measurements of oxygen saturation sufficient to assist assessment of an individuals lung function</p>
<p>How to interpret results within your level of competence</p>	<p>Understand the implications and relevant action for abnormal, low or unexpected arterial blood gas results for adults and children</p> <p>Demonstrate an understanding of the difference between oxygenation and saturation, functional and fractional saturation</p> <p>Correctly determine efficiency of blood gas exchange and the level of deviation from acceptable norms in relation to the COPD and/or other respiratory diseases status and progression of disease</p> <p>Record findings and share the information with professional colleagues</p> <p>Take appropriate action based on the blood gas results and the individuals clinical presentation to meet the individuals oxygenation needs and to reduce the level of risk</p>
<p>How to handle information and maintain the confidentiality of records</p>	<p>Record information in line with organisational requirements and maintaining the principles of confidentiality</p>

How to communicate effectively	<p>Communicate effectively with the individual and professional colleagues in an appropriate manner and style to aid understanding, respecting dignity, values and confidentiality</p> <p>Discuss the meaning of results in a professional manner for ongoing management with the individual/carer and appropriate professional colleagues</p>
The importance of promptly seeking advice, guidance and assistance when unexpected or adverse events occur	Identify appropriate competent persons to seek advice and support from whenever the procedure, data or area of expertise is outside your level of competence
Endorsement of the unit by a sector or other appropriate body (if required)	COPD Strategy Group/DH England; respiratory education providers