COPD Units of Learning

Title of overarching NOS: **CHS 192 Perform standard tests using automated analysers** **CHS 131 Obtain and test capillary blood samples**	Unit of learning to demonstrate competence: Determine blood gas status –capillary method
Details of the relationship between the unit to demonstrate competence and relevant national occupational standards (if appropriate)	Users will be able to demonstrate competence in determining an individuals blood gas status by capillary measurements and appropriate mechanised analysis
Outcomes: The individual will know and understand :	Assessment criteria To be competent the individual will be able to:
Indicative Level	Level 1 (Expert/specialist) Level 2 (Experienced practitioner) Level 3 (Novice new to respiratory disease management (including COPD))
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 progression of disease in line with your scope of practice, level of responsibility and National and local guidelines	Explain the rationale and frequency for undertaking capillary blood gas estimations to the individual with COPD and other respiratory diseases and briefly outline the methodology Clearly explain to the individual the benefits of undertaking capillary blood gas analysis and its relevance to the management of COPD and other respiratory diseases
The value, use and limitations on invasive methods to measure blood gas measurements in COPD and other respiratory diseases progression	Work collaboratively with the individual and professional colleagues to identify indications and contra indications for capillary blood gas analysis based on pulse oximetry screening Outline the individuals blood gas parameters that indicate undertaking capillary blood gas analysis and their relevance to the management of COPD and other respiratory diseases

The use and limitations of capillary blood gas analysis for the ongoing assessment and management of an individual's COPD and other respiratory diseases to determine resting hypoxaemia and suspected carbon dioxide retention	Identify the indications and contraindications for capillary blood gas analysis based on non invasive pulse oximetry screening for individuals with COPD and other respiratory diseases
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 capillary blood gas analysis	Describe and determine the risks associated with capillary blood collection, identifying any contra- indications and relevant actions Assess the risk to the individual which may result from arterial blood gas analysis
Health, safety and infection control measures	Apply health, safety and infection control measures during capillary blood collection and during analysis of the sample
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
Recognise and use the appropriate site for capillary blood collection	Select and prepare the appropriate site for capillary blood collection in accordance with local policies, protocols and national guidelines

Perform capillary 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 capillary blood gas collection and subsequent blood gas analysis Correctly and safely prepare the site for capillary blood collection Insert the blood collection equipment at the correct site and obtain the correct volume of capillary blood sample for blood gas analysis following agreed protocols Stop the flow of blood using sufficient pressure at the correct pressure point and for a sufficient time to ensure haemostasis Seek remedial assistance if and when remedial action to stop blood loss is required
Optimisation, trouble shooting and preventative maintenance of capillary blood gas analysis equipment in line with your level of authority and responsibility The calibration and quality assurance measurements required for capillary blood gas analyses	Select the appropriate equipment for capillary blood gas analysis Check the equipment is clean and fit for use Check the calibration and quality assurance measurements have been successfully completed for the capillary blood gas analysis Demonstrate an understanding of the principles of operation of the blood gas analyser and the procedures to reduce/eliminate errors
Effective use the blood gas analysis equipment , the principles of operation, analysis of results, limitations and factors which may affect accuracy	Demonstrate effective use of the equipment throughout and perform capillary blood gas analysis in accordance with local protocols
Effectively use the blood gas analysis equipment , the principles of operation, analysis of results, limitations and factors which may affect accuracy	Demonstrate effective use of the equipment throughout the procedure Perform capillary blood gas analysis in accordance with local protocols
Recording of results	Obtain relevant and reliable data on the individuals capillary blood gas status to assist the assessment of an individuals lung function

How to interpret results within your level of competence	Understand the implications and relevant action for abnormal, low or unexpected capillary blood gas results for adults and children Demonstrate an understanding of the difference between oxygenation and saturation, functional and fractional saturation Correctly determine efficiency of blood gas exchange and the level of deviation from acceptable norms in relation to the COPD and other respiratory diseases status and progression of disease Record findings and share the information with professional colleagues 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
How to handle information and maintain the confidentiality of records	Record information in line with organisational requirements and maintaining the principles of confidentiality
How to communicate effectively	Communicate effectively with the individual in a manner and style appropriate to the individuals and/or carers needs Discuss the meaning of results in a professional manner for ongoing management with the individual/carer and appropriate professional colleagues
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