Unit 101: Measuring Ankle Brachial Pressure Index

Level:	**3**
Unit type:	**Optional (Cardiac Physiology)**
Credit value:	**2**
Guided learning hours:	**14**

Unit summary

This unit aims to give you the understanding and skills you need to prepare for and carry out the measurement of ankle brachial pressure, and to document the results.

Unit assessment requirements

There are no specific assessment requirements for this unit. Please refer to the assessment strategy in *Annexe B*.

Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet **in own area of work and in accordance with Standard Operating Procedures (SOPS)** to achieve the learning outcomes and the unit..

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand the blood supply to the lower limbs and diseases that can lead to vascular disease of the lower limbs	1.1	Describe the structure and function of the arterial and venous blood vessels supplying the lower limbs			
		1.2	State the normal systolic pressures in the lower limbs			
		1.3	Describe the structure and function of the lymphatic system in the lower limbs			
		1.4	Describe a range of common vascular diseases affecting the lower limbs, e.g. lower limb arterial bypass graft, angioplasty, stent, leg ulcers			
		1.5	Describe one venous and one arterial disease that affects the lower limb			
		1.6	Outline the potential impact of vascular disease of the lower limb on patients and their lifestyle			
		1.7	Explain the common risk factors for developing vascular disease of the lower limbs			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Understand the basic principles and indications for measuring ankle brachial pressure index (ABPI)	2.1	Explain the term ABPI			
		2.2	Identify the normal values for ABPI			
		2.3	Describe the basic principles of a continuous wave hand-held ultrasound unit and sphygmomanometer			
		2.4	Explain how to choose the appropriate probe, including frequency			
		2.5	State the clinical indications for measuring ABPI			
		2.6	State the contraindications for measuring ABPI			
		2.7	Describe the standard operating procedure for measuring ABPI			
3	Be able to prepare for measuring ABPI	3.1	Select the appropriate equipment			
		3.2	Explain the reasons for the choice of equipment			
		3.3	State the requirements to only use equipment that has been validated, maintained and calibrated correctly			
		3.4	State the environmental conditions required for accurate ABPI measurement			
		3.5	Consider cultural differences (undressing etc.) when it may be necessary to invite a family member to be present			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Be able to communicate relevant information effectively to patients	4.1	Greet the patient, introduce yourself and your role			
		4.2	Confirm the patient's identity and explain the activity to be undertaken			
		4.3	Obtain verbal consent			
		4.4	Outline the purpose of informed consent, types of consent and the importance of always obtaining consent			
		4.5	Gather information from the patient; maintain the individual's privacy and dignity at all times			
		4.6	Treat the individual with compassion and respect			
		4.7	Apply standard safety precautions, including infection prevention and control			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Be able to perform the measurement of ankle and brachial pressures at rest	5.1	Adhere to all infection control procedures			
		5.2	Explain the correct position for patients when measuring ABPI			
		5.3	State how long a patient should be resting for prior to measurement and the reasons for this			
		5.4	State how to choose the correct size of cuff required and the impact of using an incorrectly sized cuff or placing the cuff incorrectly			
		5.5	Measure the brachial pressure in each arm			
		5.6	Explain the importance of palpation			
		5.7	Position the cuff on the ankle immediately above the malleoli			
		5.8	Describe the location of the posterior tibial artery (PTA) and dorsalis pedis artery (DPA)			
		5.9	Locate the site of the PTA and DPA			
		5.10	Make appropriate adjustments for patients with leg ulcers or open wounds			
		5.11	Angle the Doppler probe appropriately and measure the ankle pressures and record the highest ankle pressure measured			
		5.12	Calculate the ABPI in both legs			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.13	Evaluate the technical quality of the ABPI measurements			
		5.14	Record the results in accordance with local procedures			
		5.15	Refer to or seek advice from colleagues appropriately			
6	Be able to document relevant information	6.1	Document the results with respect to ABPI in accordance with local procedures			
		6.2	State the normal values for ABPI and the situations where ABPI may be significantly high, e.g. diabetes, renal disease			
7	Be able to maintain equipment according to manufacturer's instructions	7.1	Outline the local guidelines and protocols for cleaning and maintaining continuous wave hand-held ultrasound units and sphygmomanometers			
		7.2	Clean and maintain continuous wave hand-held ultrasound units			
		7.3	Clean and maintain sphygmomanometers, including cuffs			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
8	Be able to perform and document quality-assurance procedures, including calibration in accordance with the Standard Operating Procedure (SOP)	8.1	Describe the quality-control procedures required for continuous wave hand-held ultrasound units and sphygmomanometers			
		8.2	Perform quality-control procedures on continuous wave hand-held ultrasound units and sphygmomanometers			
		8.3	Document the results of quality-control procedures in accordance with the Standard Operating Procedure (SOP)			
		8.4	Refer/report issues of quality in accordance with the Standard Operating Procedure (SOP)			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(*if sampled*)