Standard Operating Procedure SSEHS-EI-XXX

Equipment: WelchAllyn Sphygmomanometer (Manual BP Technique)

Location: SCHOOL OF SPORT, EXERCISE AND HEALTH SCIENCES

SOP Version History

Version Reviewed	Date Revised/ Reviewed	Revision Summary	New Version Number

Withdrawal Date	

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1. PURPOSE

To describe the procedure for the operation of the WelchAllyn Sphygmomanometer. Although the operation is similar and can be transferable on all sphygmomanometer based around the same auscultation technique.

2. SCOPE

This procedure is applicable to all users of the WelchAllyn Sphygmomanometer or those that wish to use any sphygmomanometer.

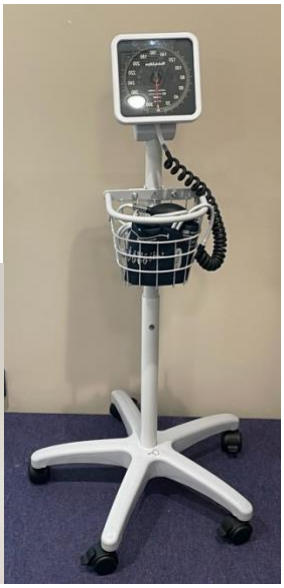
3. RESPONSIBILITES

3.1 The operator who used the device with an auscultation technique is responsible for ensuring that they are familiar with the procedure outlined in this document and have been appropriately trained.

3.2 All those using the equipment must have read and understood appropriate Ras and SOPs

4. REFERENCES

SSESH Saftey Manual
Current SOPs for:
Reporting an adverse event (AI-008)



5. GENERAL DESCRIPTION

5.1 Blood-pressure (BP) measurement is warranted in any situation that requires assessment of cardiovascular health. Manual BP monitors are a way of gathering both systolic and diastolic blood pressure through means of using an auscultation technique. Screening BP is useful not only for general cardiovascular health but also for screening for hypertension and monitoring effectiveness of treatment in patients with hypertension.

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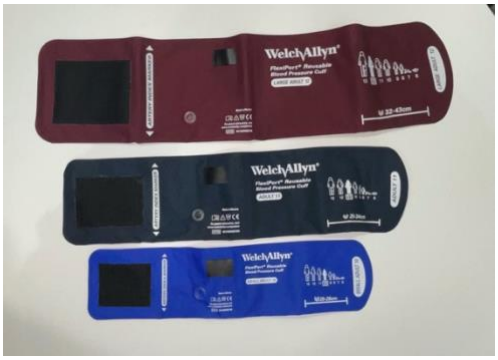
6. OPERATION

6.1 Preparing for Measurement

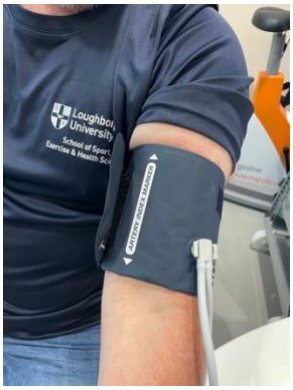
6.1.1 Prior to measurement patients should be seated for at least 5 minutes in a chair and measurement should be taken in a quiet room. Correct screening procedures should be considered and ran before use. Blood pressure should not be taken if the individual has recently engaged within physical activity, used tobacco, ingested caffeine or eating within the last 30 minutes.

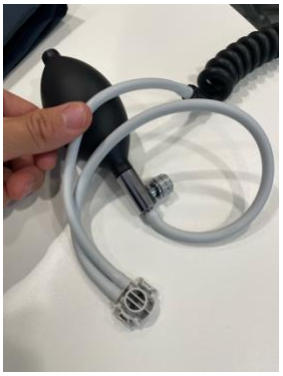
6.1.1 The patients back and legs of the individual should be supported, with legs uncrossed and feet resting on a firm surface. The measurement arm should be bare to the shoulder, and the arm should be supported at heart level.

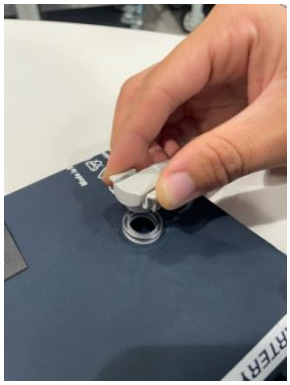
6.1.3 Appropriate cuff should be selected by measuring the arm circumference at the midpoint of the upper arm, between the acromion and the olecranon process. The measurement of the arm circumference determines which cuff size to be used below.



6.1.4 After choosing the appropriate cuff size for the patient, wrap the cuff around the arm approximately 2cm above the crease of the elbow, with the midline of the cuff placed directly over the brachial artery. Then attach the pump and release valve. The tightness of the cuff should be tight enough so that a finger between the cuff and that patient's arm.







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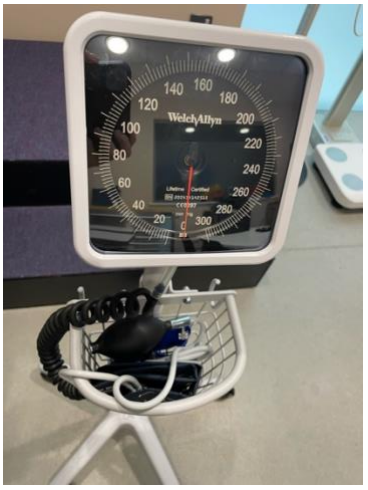
6.2 Measuring Pulse-obliteration Pressure

6.2.1 Determining the pulse-obliteration pressure helps to reduce the risk of overinflating the cuff and causing discomfort to the patient.

6.2.2 Palpate the radial pulse whilst inflating the cuff to 80 mm Hg and then continue to inflate the cuff in 10 mm Hg increments taking note of when the pulse disappears.

6.2.3 Start to deflate the cuff at a rate of 2 mm Hg and note when the pulse reappears as this notifies the pulse obliteration pressure.

6.3 Blood Pressure Measurement



6.3.1 Place the stethoscope over the brachial artery using enough pressure to provide good sound transmission.

6.3.2 Inflate the cuff to 20-30 mm Hg above the pulse obliteration pressure then deflate the cuff at a rate of 2 mm Hg per second by opening the value attached to the bell slowly, whilst listening for the appearance of Korotkoff sounds.

The appearance of a repetitive tapping sound (reappearance of the pulse) is equal to the systolic pressure and then the disappearance of any sounds equals the diastolic pressure. The cuff should still deflate for another 10 mm Hg to ensure that diastole pressure has been measured correctly.

6.3.3 Blood Pressure should be taken twice, with at least one minutes in-between measurements.

6.4 Interpretation

6.4.1 The following data provided by the American College of Sports Medicine (ACSM) can be used to categorise your blood pressure reading.

CATEGORY	SYSTOLIC.MMHG.	DIASTOLIC.MMHG.
NORMAL	<120	<80
PREHYPERTENSION	120-139	80-89
STAGE 1 HYPERTENSION	140-159	90-99
STAGE 2 HYPERTENSION	>160	>100

7. CLEANING AND MAINTENANCE

7.1 To avoid moisture entering the instrument during external cleaning use only a clinell wipe and dry with a dry tissue. If liquid does go into the main body of the instrument, wait untll the instrument is completely dry before use.

7.2 After use ensure that cuff have been sterilised using a clinell wipe and inflating tubes have been inspected and reported if any issues have arisen.

8. CALIBRATION

Calibration of the device is not needed.

9. PROCEDURE TO BE CARRIED OUT IN THE EVENT OF MALFUNCTION

In the event of malfunction or breakdown, display an “OUT OF ORDER, DO NOT USE” notice clearly on the instrument and contact the nominated person responsible for the equipment who will arrange for repair of the instrument if necessary.

10. SAFETY

10.1 The user must follow and comply with all university and departmental safety guidelines (see departmental safety manual) when using this equipment.

10.2 Use of the pulse-obliteration pressure procedure must be adopted to ensure participant comfort and over inflation of the cuff.

11. DOCUMENTATION

n/a