LANCASHIRE & SOUTH CUMBRIA PRIMARY CARE TRAINING HUB

Clinical Education Session Handbook

Blood Pressure

Lancashire & South Cumbria
PRIMARY CARE TRAINING HUB

Contents

Introduction

Blood pressure is the pressure of circulating blood against the walls of blood vessels. Most of this pressure results from the heart pumping blood through the circulatory system. Blood pressure is usually expressed in terms of the systolic pressure over diastolic pressure in the cardiac cycle. It is measured in millimetres of mercury above the surrounding atmospheric pressure.

- **Systolic pressure.** The first reading is called your systolic pressure. It's the first or top number in a reading. Systolic pressure measures the pressure inside your arteries when your heart is contracting to pump blood.
- **Diastolic pressure.** The second reading is your diastolic number. It's the second or bottom number. Diastolic pressure measures the pressure inside your arteries when your heart relaxes between beats.

Equipment Required

Equipment for the clinical education session should include:

- PPE
- Handwashing facilities
- Clinell Wipes (or alternative for wiping down surfaces)
- Stethoscope
- Blood pressure cuff & Sphygmomanometer
- Speaker & Blood Pressure Simulator
- Prosthetic arm
- Batteries x6
- Universal plug

Figure 1

Things to Consider

Think about your environment….

Review the consulting room where procedure takes place. Consider the layout and location of rooms to ensure there is a confidential quiet, clean, private area that is welcoming.

Make sure all your equipment is ready at hand before you start and make sure you will not be disturbed.

Adhere to Infection control Policy.

How can I make sure the patient is ready?

- Welcome the patient when they arrive and introduce yourself.
- The patient should be put at ease from the start, welcoming them is an important part of this.
- You should check name, date of birth and address to make sure they are correct.
- It is important that the patient understands what you are going to do in the procedure and what to expect; including taking the measurement and proceeding to explain the results using language the patient understands.

Patients with specific needs or disabilities

It is important to consider patients with specific needs.

These reasons may include:

● disability (physical or mental) and the patient's physical limitations

● language barriers and cultural beliefs

Language and cultural differences can affect understanding. It is important to take measures to ensure all patients understand the purpose of the procedure. Language translation services are available. Primary care is responsible for sourcing and offering language support if needed.

● the need for assistance and seeking specialist advice if necessary

Let's get Practical!

- Welcome
- Check identity
- Explain the procedure fully – explain that the test may feel a little uncomfortable.
- Answer any questions relating to the procedure
- Get informed consent

Using the Mannequin & Measuring Blood Pressure

Place the prosthetic arm on a flat surface, palm facing up.

Fit the batteries into the blood pressure simulator unit

Plug in the speaker using the universal plug and using the cable connect the speaker to the blood pressure simulator unit.

Connect the yellow tube running from the prosthetic arm to the simulator unit and the black cable.

Once connected you have switched on the simulator unit and you will feel and hear a palpable pulse to the wrist area when you apply gentle pressure, too much pressure will knock off the pulse so just press lightly.

Attach the blood pressure cuff to the upper part of the arm as demonstrated in the picture. (Fig 1)

Squeeze the balloon to inflate the cuff.

Once the cuff is inflated, slowly deflate the balloon as you listen to hear the first "whoosh" of the blood flowing. Record or remember that number. This is your systolic blood pressure.

You will hear the blood pulsing, so keep listening and allow the balloon to slowly deflate until that rhythm stops. When the rhythm stops, record that measurement. This is your diastolic blood pressure.

You'll record the blood pressure reading as the systolic over the diastolic, such as 120/80.

In clinical practice

Instead of using the speaker you will use a stethoscope to hear the sound of the blood flow.

Once you have inflated the cuff place the stethoscope with the flat side down on the inside of the elbow crease, toward the inner part of your arm where the major artery of your arm is located. Be sure to test the stethoscope before using it to make sure you can hear properly. You can do that by tapping on the stethoscope.

As above you will slowly deflate the balloon as you listen to hear the first “whoosh” of the blood flowing and this is your systolic blood pressure.

Keep listening and allow the balloon to slowly deflate until that rhythm stops and this your diastolic blood pressure.

Inform the patient when the procedure is over.

Top Tips

- Be calm and confident
- Seek help from a colleague if in doubt
- Make sure the blood pressure cuff is the right. Cuffs come in different sizes, including paediatric sizes for very small arms and large cuffs for larger arms.
- You should be able to comfortably slip one finger between the arm and the cuff when it's deflated.
- Encourage patients to sit up straight without crossing legs.
- Take at least two readings to make sure they're correct. The readings should be within a few numbers of each other.
- Generally, the first reading will always be higher, you may need to do a third measurement to ascertain a correct measurement.
- Be aware that automated devices may not measure blood pressure accurately if there is pulse irregularity (for example due to atrial fibrillation)

Clinical Education Session

Learners Toolkit

Blood Pressure

Name:

Date:

Lancashire & South Cumbria
PRIMARY CARE TRAINING HUB

Evaluation of Learning and Assessment form:

Pre-clinical educations session – what are my learning needs?
Factors that have enabled me to learn & what areas have I found most useful:
Areas still to learn more about & action plan going forward with time scales and who may be able to help.
What did I enjoy most about the clinical education session?
Useful Resources:

Let's think about it … Do you…

Know what blood pressure is?	
Prepare the examination room and know how to use the equipment to obtain a blood pressure reading?	
Explain the procedure to be undertaken?	
Have an awareness of what is a normal blood pressure?	
Know how to explain the results to the patient?	
Know how to advise a patient on lifestyle modifications to improve blood pressure?	
Keep good records?	
Reflect on communication with the patient?	
Reflect on the patients view of the procedure?	
Reflect on your view of the procedure?	
What can you learn from these reflections?	

Resources

Home - Royal Marsden Manual (rmmonline.co.uk)

The Royal Marsden Manual of Clinical Nursing Procedures.

Lancashire and South Cumbria Integrated Care Board: Right Person, Right Care (icb.nhs.uk)

Local Services L & SC.

Clinical topic guides (rcgp.org.uk)

The Royal College of General Practitioners.

Home - elearning for healthcare (e-lfh.org.uk)

Online modules available at e-learning for health

Blood pressure test - NHS (www.nhs.uk)

Understanding blood pressure - BHF

Hypertension | Health topics A to Z | CKS | NICE

Overview | Hypertension in adults: diagnosis and management | Guidance | NICE

Blood pressure measurement devices - GOV.UK (www.gov.uk)