Name of the clinical skill: "Demonstration of the procedure for measurement of blood pressure in a standardized patient and interpretation of the results"

Algorithm for fulfilling the task for the student

№	Manipulation	Criteria for monitoring of the correct implementation
1.	Say hello and introduce yourself to the patient. Provide the information about the procedure and get consent to conduct it. Eliminate factors that affect the accuracy of blood pressure measurement. Decontaminate the arms and the stethoscope membrane with an antiseptic.	Control of the performance.
2.	It is necessary to identify the correct size of the cuff. The cuff should cover at least 80% of the circumference of the shoulder and 2/3 of its length.	The standard cuff (12-13 cm wide and 35 cm long) is used in people with normal and lean arms. In patients with muscular or thick arms, a 42 cm long cuff should be used. 12 cm long cuff should be used in children under five years old.
3.	Put the patient's arm correctly: in the extended position with the palm facing up, the muscles are relaxed. If the patient is sitting, then for a better extension of the limb, you can ask him/her to put a clenched fist of his free hand under his elbow. Place the cuff in the middle of the naked shoulder at the level of the heart. Close the valve of the rubber cylinder moderately and start pumping air into the cuff. It fills with air and gradually squeezes the shoulder and *a. brachialis.*	Place the cuff so that the lower edge of the cuff is 2-2.5 cm above the antecubital fossa. A finger should pass between the cuff and the surface of the shoulder. You cannot put a cuff over clothing or squeeze the shoulder with tightly rolled up sleeve, because the accuracy of blood pressure measurement may be affected.
4.	At the first assessment it is recommended to determine the level of systolic blood pressure (SBP) by palpatory method*. For this it is necessary to determine the radial pulse and then quickly pump air into the cuff to 70 mm Hg. Then semi-rapidly inflate the cuff until the radial pulse disappears. After that, start releasing air from the cuff (by dosing the valve). The value at which pulsation appears on *a. radialis* during the release of air, corresponds to the SBP.	Visual monitoring of blood pressure measurement. Check the position of the pressure gauge needle relative to the zero scale mark.

5.	Using palpation, determine the place of a distinct pulsation of the artery in the antecubital fossa and place a stethoscope directly on that place.	A stethoscope should be placed 1 cm medial to the antecubital fossa, without special pressure.
6.	When measuring by auscultatory method, you should inflate the cuff to 20-30 mm Hg greater than the estimated systolic value by palpation.	Visual control of air pumping.
7.	Deflate the cuff slowly - 2 mm Hg per second - and simultaneously with the help of a stethoscope listen to the tones on the brachial artery and observe the indicator of the scale of the manometer.	Visual control of air release rate. Student determines the first phase (appearance) and the fifth phase (disappearance) of Korotkoff tones, which correspond to SBP and diastolic blood pressure (DBP).
8.	Immediately record the readings to the nearest 5 mm (round off upward).	Check the result of blood pressure measurement.
9.	Evaluate the result.	At the first assessment blood pressure should be determined on both arms, as well as in the sitting, standing and lying position. Higher values are taken into account. Measurements should be carried out at least two times with an interval of 2-3 minutes. If the results differ by more than 5 mm Hg, it is necessary to conduct repeated measurements in a few minutes. It is necessary to clarify whether the level of SBP and DBP correspond to normal values.

** - Such palpatory method of measuring systolic blood pressure helps to avoid the error associated with the "auscultatory gap" - the disappearance of Korotkoff tones immediately after their first appearance.*

Normative documents and references, which were used for the preparation of the algorithm and check-list:

1. 2013 ESH/ESC Guidelines for the management of arterial hypertension. The Task Force for the management of arterial hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC) / G. Mancia, R. Fagard, K. Narkiewicz [et al.] // Eur. Heart J. – 2013. – Vol. 34. – P. 2159-2219.
2. Manual on hypertension / ed. V.N. Kovalenko, E.P. Svishchenko, Yu.N. Sirenko. – Kyiv: MORION, 2010. – 491 p.
3. Unified clinical protocol for primary, emergency and secondary (specialized) medical care "Hypertension": the order of the Ministry of Health of Ukraine № 384 dated 24.05.2012.