

**Provider Network Standardization Workgroup (St Mary's)**

**Communication Tool:**

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**Date: 5/3/2016 Revised 5/9/2017**

**SUBJECT: OBTAINING ACCURATE BLOOD PRESSURE**

**Background:** Hypertension control is a priority on St. Mary's 2016 Annual Plan Dashboard. The standardization of proper blood pressure technique is essential to our commitment in providing quality care to the patients in our practices. All clinical staff will be required to follow the two-step blood pressure method when obtaining a manual blood pressure for patients age 18 years and older.

**Description:** Patients 18 years and older will have their blood pressure measured using an accurate technique.

**Rationale:** An accurate blood pressure is the essential initial step in the diagnosis of hypertension. Errors of only a 5 mm HG range will miss approximately 21 million hypertensive patients. Of these 21 million missed diagnoses, 125,000 of those patients will have a Cardio Vascular Disease related death. 20% or **25,000** of those deaths could have been prevented. On the other hand, patients may be treated unnecessarily due to an inaccurate blood pressure reading. On average, the cost is \$1000 per person for this unnecessary treatment. The two-step blood pressure is considered the gold standard of care by the Maine Cardiovascular Health Program.

**Action:** Review the attached workflow with clinical staff and providers of all Primary Care and Specialty Practices

**Implementation Date:** 5/9/2016

**Measurement:** Monthly internal audits will be conducted by Clinical Leaders. See attached audit sheet.

**Workflow:**

**Procedure:**

For obtaining an accurate blood pressure effectively, the following considerations need to be made:

- Patient should be sitting in the chair with their back supported.
- The upper arm must be bare.
- Patient's legs should be uncrossed and their feet should be flat on the ground.

- The arm being tested should be supported at heart level.
- The bladder of the cuff should be 80-100% of the arm circumference.
- The patient should be seated for five (5) minutes.
- The patient should not have had caffeine, tobacco or have exercised for at least 30 minutes prior to obtaining their blood pressure. If blood pressure is noted to be elevated, please educate the patient to avoid caffeine, tobacco or exercise prior to future appointments.
- Avoid taking a blood pressure on an arm that has an incision, a graft, has had ischemic changes or an arteriovenous (AV) shunt or graft; that is the same side of the body as a mastectomy or axillary surgery. Also, do not place the blood pressure cuff over a peripherally inserted central catheter (PICC line) or midline catheter site.

The two-step blood pressure technique (estimating the systolic pressure) is essential to obtaining an accurate blood pressure. Please follow these steps carefully:

1. Size and place the cuff
2. Palpate the radial pulse, and then inflate the cuff
3. Estimate the systolic pressure. This is done by palpating the radial pulse while inflating the cuff. Once you can no longer feel the radial pulse, this is your estimated systolic pressure. This is necessary because of a condition called auscultatory gap that exists in some people.
4. Deflate the cuff completely. Wait 15 to 30 seconds.
5. Determine the MIL (Maximum Inflation Level). This will be 30 mm HG greater than your estimated systolic pressure.
6. Place your stethoscope on the brachial pulse and inflate the cuff to the MIL.
7. Slowly deflate your blood pressure cuff. Note the number on the manometer when you hear the first clear beat. This is the patient's systolic pressure.
8. Continue to slowly deflate your blood pressure cuff (approx. 2 to 3 mm HG per second). The diastolic blood pressure is recorded at the disappearance of sound, **not** at the last sound. For example, if the last sound is heard at "90," then the diastolic blood pressure is recorded at "88."
9. If initial blood pressure reading is **greater than or equal to 140/90**, please retake the blood pressure at the end of the visit.
10. Notify patient of the reading.

**For those employees with a documented impairment that prevents you from obtaining a manual blood pressure, please speak with your manager.**

Orthostatic blood pressure is used for a variety of reasons. They include: assessing hypovolemia, autonomic dysfunction and/or unexplained weakness. The following steps must be followed to properly measure an orthostatic blood pressure (please use the same arm for all of the blood pressure readings).

1. Place the patient in a supine position for five (5) minutes. Follow the two-step blood pressure method to obtain an accurate blood pressure. You may take the blood pressure again in two (2) minutes to ensure the accuracy of the first reading.
2. Assist patient to a sitting position. Take the blood pressure reading within one (1) minute of the position change.
3. Assist patient to a standing position. Take the blood pressure reading within one (1) minute of the position change. Retake again three (3) minutes after the position change.
4. If the patient becomes faint or dizzy during this process, discontinue taking orthostatic vital signs immediately and help the patient back to a supine position.
5. A positive orthostatic change includes a patient experiencing light-headedness during the testing, a systolic decrease of 20 mm HG or greater and/or a decrease in the diastolic reading of 10 mm Hg or greater within three (3) minutes of the position change. Please report this to the Provider immediately.

For a description on measuring lower extremity blood pressure, please refer to the Clinical Nursing Skills book

#### Documentation of Blood Pressure:

1. Blood pressure should be documented in the medical assessment form. When documenting an orthostatic blood pressure series, "postural" blood pressure should be checked. The three readings should be entered accurately. The cuff size should also be indicated.
2. When entering a routine blood pressure, "Standard" blood pressure should be checked. Again, if a reading is **equal to or greater than 140/90**, the blood pressure needs to be rechecked. When documenting the final blood pressure readings, the lowest blood pressure reading should be entered in the first line. Please note the cuff size that is being used to obtain the blood pressure value.

#### Tool Kit-

The tool kit provided by MaineHealth can be used as a resource to patients and staff. It contains various educational documents and can be ordered at no cost to the organization.

**TAKING AN ACCURATE BLOOD PRESSURE AUDIT FORM**

Patient position	Back supported		
	Feet Flat		
	Brachial Artery at level of left atrium		
	Other considerations (ie emotional state, talking, bladder, etc)		
Cuff position	Bladder centered over brachial artery		
	Cuff 1" above bend of elbow		
	Proper cuff size: bladder of cuff 80-100% arm circumference for adults, 100% arm circumference for children to age 18		
	No clothes between bladder and arm		
A-(spell out) Technique	Palpates radial pulse		
	Estimates systolic pressure		
	Pumps to 20-30 points above MIL		
	Rate of deflation 2-3mm/sec		

**Observation Checklist – Audit Sheet**

Date of Observation: \_\_\_\_\_  
 Observer's Name: \_\_\_\_\_  
 Employee Being Observed: \_\_\_\_\_

Met    Not Met

**Other information (optional):**

Policy Link:  
 Instructions:

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