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## **BHS ADULT BLOOD PRESSURE MONITORING GUIDELINES**

### **PURPOSE**

Monitoring blood pressure is a basic tool to screen for elevated blood pressure and to monitor blood pressure control for clients with hypertension. Client screening of blood pressure is important in the behavioral health setting as clients are at significant risk for developing metabolic syndrome; risk factors include treatment with antipsychotic medications, poor diet, sedentary lifestyle and obesity. Measurement of annual height, weight and blood pressure for all clients who receive medication support services is a meaningful use criterion BHS has adopted.

### **1. FREQUENCY OF BLOOD PRESSURE MONITORING**

1. All clients receiving medication support services should have at minimum a yearly blood pressure taken. Blood pressure monitoring is the responsibility of the psychiatric prescribing clinician.
2. For clients prescribed an atypical antipsychotic, follow the atypical antipsychotic guidelines, which may involve more frequent monitoring.

### **2. MEASURING BLOOD PRESSURE**

#### Technique for measuring blood pressure:

1. Client position:
  - a. Seated and back supported
  - b. Both feet flat on the floor; do not cross legs
  - c. Arm at rest, supported at the level of the heart
  - d. Palm facing upwards
  - e. Choose appropriate cuff size to ensure accurate reading
  - f. Ideally, at rest for 5 minutes without talking
  - g. If possible, turn blood pressure monitor away from client
2. If using an automatic Welch Allyn machine:
  - a. Place “artery index marker” on above the artery, which is located on the medial side of arm. Grey cord should lie in the middle part of the arm.
    - i. If measuring vitals on patient’s right arm, rotate the cuff upside down and follow the same positioning.
  - b. Wrap cuff around arm and secure with Velcro.

- c. Check cuff size. The cuff is the correct size if the “artery index marker” line lies within the middle of the white horizontal size check line.
  - d. Press reading button to start measurement. Measurement should take 10-15 seconds
  - e. Machine can be left plugged in after use.
  - f. See Appendix 1 for additional information on the use and maintenance of the Welch Allyn Blood Pressure machine.
3. General Do’s and Don’ts when measuring blood pressure
- a. Do:
    - i. Have client remove clothing on arm. Skin should be in contact with the cuff. Clothing over the arm may cause an inaccurate reading.
    - ii. Ask client about caffeine consumption, smoking, or exercising within the last 30 minutes. If yes to any of the above, consider checking BP at the end of the visit.
    - iii. Wait for client to be in a relaxed state and avoid measurements if patient is anxious, nervous, or agitated.
    - iv. Ensure client has emptied his/her/their bladder.
  - b. Don’t:
    - i. Client should not be talking during measurement
    - ii. Client should not be chewing gum.
    - iii. Client should not be out of breath when taking BP measurement.
4. At the first visit, record BP in both arms. Use the arm that gives the higher reading for subsequent readings.
- a. If repeating BP measurements during the same visit:
    - i. Separate repeated measurements by 1–2 min.  
**NOTE:** Resting between readings can significantly drop blood pressure
  - b. If the reading is much higher than client’s baseline, check cuff size. Small cuff may provide falsely high readings.

Documentation:

Document blood pressure results in the client medical record. If using Avatar, be sure to enter results using the Vitals Entry Form.

### 3. RESPONSE TO BLOOD PRESSURE RESULTS

Table 1. Shows the guidelines for responding to blood pressure results. Referral to “primary care” includes referral to clinic behavioral health homes, if available.

**Table 1:** Target Blood Pressure Goal is SBP mmHg <130 and DBP mmHg <80. Below are recommendations for follow up based on initial blood pressure measurements for adults without end organ damage:

Category	SBP mmHg	DBP mmHg	Follow-up
<b>Normal</b>	<120	and <80	Recheck in 1 year or sooner based on BHS antipsychotic guidelines. Promote healthy lifestyle
<b>Elevated BP</b>	120-129	and <80	Reassess in 3-6 months. Start with nonpharmacological therapy
<b>Stage one hypertension</b>	130-139	or 80-89	Refer client to primary care within 1 month to discuss BP-lowering medication and for more frequent BP monitoring.
<b>Stage two hypertension</b>	≥140	or ≥90	Refer client to primary care within 1 month to discuss BP lowering medication and for more frequent BP monitoring.
<b>Hypertensive Urgency</b>	>180	and/or >120	Refer client to urgent care within 2 days, or <b>send to ER by ambulance if exhibiting:</b> confusion or altered mental status, chest pain, or difficulty breathing; irregular heart rate or appearance of severe illness
<b>Pregnancy</b>	≥ 140	≥ 90	Refer client to prenatal provider (or urgent care if she doesn't have a provider) within 48 hours.

Reference: 2017

ACC/AHA/AAPA/ABC/ACPM/AGS/AphA/ASH/ASPC/NNMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. A Reports of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

**4. Lifestyle Modification Recommendations from 2013 AHA/ACC Guideline on Lifestyle Management to Reduce Cardiovascular Risk**

Clinicians should encourage clients to follow the lifestyle recommendations below

<b>Modification</b>	<b>Recommendation for ideal</b>	<b>Average SBP Reduction Range</b>
<b>Weight reduction</b>	Achieve or maintain normal body weight (BMI range: 18.5-24.9 kg/m <sup>2</sup> )	5mmHg/10kg 1mmHg drop for every 1kg decrease in weight
<b>DASH eating plan</b>	Diet high in fruits, vegetables, and low fat dairy products. Diet low in saturated and total fat. Diet that limits sweets, sugar sweetened beverages and red meat.	11 mmHg
<b>Dietary sodium reduction</b>	Reduce sodium to no more than 1500 mg per day. Even without achieving these goals, reductions of 1000 mg per day lower BP.	5-6 mmHg
<b>Physical activity</b>	Physical activity and physical fitness decrease the risk of developing hypertension. Following are examples of types of exercise that have been shown to decrease blood pressure. <ul style="list-style-type: none"> <li>- Aerobic exercise: 90-150 minutes of exercise per week</li> <li>- Dynamic resistance: 90-150 minutes per week</li> <li>- Isometric resistance (ie. Handgrip) 4x 2 minute handgrip. 1 minute rest between exercises</li> </ul>	5-8 mmHg
<b>Moderation of alcohol consumption</b>	Men: no more than 2 drinks/day Women: no more than 1 drink/day	4 mmHg
<b>Stop Smoking</b>	Avoid Smoking	
<b>Potassium Supplementation</b>	3500-5000 mg/day Unless patient has CKD or is using potassium reducing medication	

Reference: 2017

ACC/AHA/AAPA/ABC/ACPM/AGS/AphA/ASH/ASPC/NNMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. A Reports of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

See Client Educational Materials attached.

**APPENDIX 1:**  
Information on the Welch Allyn Blood Pressure Machine

Welch Allyn Machine Maintenance:

1. Wash cuff and Velcro with soap and water periodically. Note, the Velcro portion contains the most bacteria and debris
2. After 5000 BP readings, service the device for calibration by calling facilities department who will set up service with Welch Allyn.
  - a. To check number of readings on machine, go to “cycle count”

Welch Allyn Machine Features:

1. “Review” feature saves the last 50 readings with date and time stamp.
2. “Cycle Count” keeps a log of all readings.
3. Machine utilizes SureBP technology and will measure blood pressure “on the way up,” taking the diastolic pressure prior to the systolic pressure.
  - a. As a default setting, the machine will divert to “step deflation” where it will increase the pressure up to 160mmHg, then measure blood pressure on the way down.