Self-Monitoring Blood Pressure Program
Step-by-Step Implementation Guide

Everything you need to know about starting a self-monitoring blood pressure program in clinical practice

Developed in collaboration with Nevada Health Centers, the Nevada Division of Public and Behavioral Health, and the Southern Nevada Health District

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Self-Monitoring Blood Pressure Program
Executive Summary

The Southern Nevada Health District, in collaboration with Nevada Health Centers and the Nevada Division of Public and Behavioral Health, is committed to providing quality health care services to the community aimed at eliminating health care disparities across all racial/ethnic groups. Heart disease and stroke are both leading causes of death in the United States and Nevada. In the United States, one out of every three deaths is caused by heart disease or stroke. The prevalence and cost of heart disease and stroke are expected to significantly increase over the next two decades. Eighty percent of heart disease is preventable. There are modifiable risk factors that increase the risk of heart disease: tobacco use, lack of physical activity, obesity or overweight, high blood pressure, and high cholesterol.

This Self-Monitoring Blood Pressure (SMBP) Program guide for clinicians is a clinical support resource for implementation with patients at-risk for or diagnosed with hypertension. One in three American adults diagnosed and receiving treatment for high blood pressure do not have it under control. Self-monitoring blood pressure programs help empower patients to make hypertension control a priority.

In 2017 the American Heart Association and American Medical Association developed new hypertension guidelines. The new hypertension guidelines suggest providers emphasize self-monitoring for high blood pressure diagnosis, treatment, and management. Appropriate management of hypertension helps reduce mortality rate of stroke and coronary heart disease. Studies indicate a majority of patients with hypertension reported facing challenges to achieving their treatment goals. The factor that is known to be a cause of uncontrolled hypertension is patients’ lack of adherence to a therapeutic treatment regimen. Self-monitoring blood pressure interventions support patient adherence to prescribed treatment regimens. Patients involved in SMBP management become aware of their blood pressure levels and actively engage in a treatment plan.

Clinicians can help to improve self-monitoring outcomes by providing training to patients on how to accurately monitor their blood pressure at home. This guide describes methods to implement and facilitate a successful SMBP management program with adequate clinical support and tools.
Engaging Patients in Hypertension Self-Management

The Self-Monitoring Blood Pressure (SMBP) Program is one strategy that can help reduce the risk of death or disability in patients with uncontrolled hypertension. Patients identified by clinicians as having uncontrolled hypertension could be considered for further clinical interventions. SMBP is a tool designed for health care professionals to actively engage patients in blood pressure self-management. The program is sometimes referred to as, “home blood pressure monitoring” or “self-measured blood pressure monitoring.”

Patients enrolled in the SMBP program measure their blood pressures at home, record the results, and discuss them with their provider during their appointments. This program helps manage high blood pressure and reduce the risk of heart disease and stroke, while allowing the patient to be actively involved in their health care.

This comprehensive guide provides action steps and resources for clinicians who want to make hypertension control a priority in patient care. Implementation of a SMBP includes regular measurement of blood pressure conducted by the patient outside of the clinical setting. The patient-obtained measurement is not intended to replace clinical implications or clinical judgement. The clinical concept of a SMBP program entails the following elements:

- Integration of a SMBP in clinical practice
- Training health care support team on patient engagement and education
- Guidance on selecting a reliable self-monitoring blood pressure device
- Identify current health insurance coverage for SMBP or institute blood pressure monitor loaner program
- Suggestions for program evaluation and patient blood pressure management tracking.

The elements detailed in this guide will describe clinician action steps that can facilitate effective implementation of the SMBP. The core components include clinical support interventions, resources to empower patients to actively participate in their health care, and SMBP preparation and techniques for accurate blood pressure readings.
The Burden of Hypertension

Prevalence and Hypertension Control

Hypertension is also referred to as high blood pressure. Blood pressure is the pressure of the blood against the walls of the blood vessel as it moves through the body. Blood pressure readings vary throughout the day, but if it is consistently elevated, it can lead to serious health problems. Even small elevations in blood pressure increase the risk for cardiovascular disease and mortality. The risk of stroke doubles for every 20mmHg increase in systolic blood pressure (SBP) or 10 mmHg increase in diastolic blood pressure (DBP). An estimated 70 million adults (29 percent) are diagnosed with hypertension. The burden of hypertension contributes to many major health conditions including heart failure, heart attack, kidney disease, stroke, and several other chronic conditions.

The costs from health care services, medications, and missed days of work due to high blood pressure, costs the country $48.6 billion each year. In the United States, an estimated 86 million adults (about 1 in 3) have high blood pressure and for nearly half of those people blood pressure is uncontrolled. This population of people with uncontrolled blood pressure represent a prime group of patients for whom clinicians could recommend further clinical interventions, including SMBP to help manage their blood pressure.

**Figure 1.** Adapted from Centers for Disease Control and Prevention. Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians. Atlanta, GA: Centers for Disease Control and Prevention, US Dept. of Health and Human Services; 2014.
Self-Monitoring Blood Pressure

Definition and Clinical Indicators

Self-Monitoring Blood Pressure (SMBP) is a blood pressure measurement performed by the patient outside of a clinical setting at the home or elsewhere. The patient uses an approved blood pressure measurement device to obtain self-measured blood pressure readings. This clinical-based intervention is an alternative approach to monitoring blood pressure in a traditional office setting that could improve blood pressure control, making it more convenient and accessible for patients. SMBP also helps clinicians improve the accuracy of a hypertension diagnosis in their patients, as it gives the clinician the opportunity to assess whether the patient’s anti-hypertensive treatment regimen is effectively managing their blood pressure. If clinicians identify the uncontrolled readings, they can respond quickly to modify treatment. Additionally, it is recommended that physicians confirm a potential diagnosis of hypertension through the utilization of out-of-office blood pressure measurements. Research estimates that up to 35 percent of people experience a phenomenon known as White-Coat Hypertension in their doctor’s office, which is characterized by elevated blood pressure readings that are higher than when compared to readings taken outside of the doctor’s office, due to anxiety experienced in a medical environment. SMBP is known to be effective in certain patient priority groups, including those at risk for or diagnosed with White-Coat Hypertension, the elderly, people with chronic conditions such as diabetes or chronic kidney disease, and pregnant women. Patients who engage in SMBP have the opportunity to take an active role in their care and learn ways to manage their blood pressure.

Studies show that SMBP:

▶ Improves blood pressure control when patient care is personalized in conjunction with clinical interventions.
▶ Patient data is used for subsequent office visits to accurately determine if their blood pressure is self-managed.
▶ Increase accuracy rates for providers diagnosing hypertension.
▶ Increases patient engagement; patients engaged in care are more likely to adhere to their prescribed treatment regimen.
▶ Improves provider patient interaction, there is immediate action to address elevated blood pressure readings.
▶ Encourage providers to follow treatment protocols to help patients adhere to treatment manage blood pressure to bring BP within normal levels.
Engagement of Clinical Care Team to Support SMBP

Integrating a SMBP in clinical practice delivers measurable outcomes with positive benefits for patients and providers. Clinicians are essential to the extensive implementation of SMBP. Direct clinician involvement and support is critical for empowering patients, educating them on correct measurement techniques, monitoring home readings, and providing timely follow-up care for medication titrations and lifestyle modifications. Effective communication with patients and a system for managing and evaluating their self-measured blood pressure plays an integral part of the success of a SMBP.

This guide provides a comprehensive plan and resources for clinicians who want to support SMBP in their clinical practice and prioritize hypertension control. Figure 1 documents evidence-based strategies adopted from Million Hearts Action Guide illustrates how to implement a comprehensive SMBP initiative.

Strategies are organized into three action step categories:

- Care teams support SMBP
- Integrate clinical support systems
- Empower patients to use SMBP

By adopting these strategy types into clinical practice, clinicians can implement a seamless SMBP program part of a routine clinical support intervention for patients with hypertension.

Figure 2. Strategic Steps to Implementing a Comprehensive SMBP Program
Clinicians should identify and train clinical care staff for the specific roles and responsibilities of training and educating patients on SMBP. At least one medical assistant or community health worker per designated clinician on duty and one alternate trainer in the office to assist as needed is recommended. Development of a standardized training and assessment on measuring blood pressure accurately is also critical. Implementing competency level assessments will help demonstrate that staff can effectively facilitate SMBP skills to teach patients how to perform accurate blood pressure measurements at home.

Attached in Appendix A is the competency form checklist. Assessment protocol:

- Screen competencies at least twice a year.
- Complete form with name of employee and the trainer.
- Conduct a step-by-step assessment and determine if the employee follows the procedures correctly.
- Trainers place a check mark in either column labeled “Meets competency” or “Needs more training.”
- Document the “Method of validation” by:
  - If the trainer performs the procedure and the employee then models the procedure, write “RD” for the return demonstration in a simulated patient setting.
  - If the trainer is observing the employee demonstrate the procedure while providing direct patient care, write “PC” for direct patient care observation.
- The employee and trainer should sign and date the competency form.
- Place the competency form in the employee’s training file.

** Modifications to the clinical competency evaluation form are encouraged to fit local practice or health center.
Integration of Community Health Workers in SMBP

A community health worker (CHW) is a trusted member of the community or has an unusually close understanding of the community served. CHW’s are trained to serve as frontline public health workers to bridge the gap between communities and the health care system.

They establish a trusting relationship with community members to advocate on behalf of the people and communities served. As community liaisons, they are uniquely positioned to facilitate change to improve access to services, quality of care, and deliver culturally appropriate health education and services. CHWs help strengthen clinical and community linkages aimed to build individual and community capacity by increasing health literacy and self-sufficiency through various activities such as outreach, community education, informal counseling, social support, and advocacy.\textsuperscript{10}

The community health worker model was designed to conduct community-based interventions and activities that promote optimal health, manage risk factors and prevent cardiovascular disease, and reduce health disparities. The peer-on-peer approach is found to be effective in improving health outcomes, as well as to promote and eliminate barriers to managing chronic disease. CHWs engage in a team-based care model where they work with patients and clinical care staff to help improve blood pressure outcomes.

CHWs may implement one or more of the following models of care for hypertension control:

- Delivery of intervention by trained CHWs
- Regular one-on-one counseling and tracking of SMBP readings
- Patient-clinician communication via a “feedback loop” by working with clinicians to support a customized treatment plan based on patients’ reported readings
- Patient navigator by directing individuals to additional clinical support services or community resources
- Patient engagement, enrollment, and training participants in SMBP
- Screening and health education for risk factors and promoting health behavior change
Elements of a SMBP Program in Patient Care

Clinical support is key to the success of a SMBP intervention for patient care. SMBP interventions have successfully lowered blood pressure in patients with elevated blood pressures. Delivery of the intervention is monitored by trained clinical staff such as Nurse Practitioners, Health Educators, Medical Assistants, and Physician Assistants. Regular patient communication to monitor SMBP readings is vital to helping patients learn how to consistently control their blood pressure. Integration of a patient “feedback loop” is essential in which provider support and advice are customized according to the patient’s needs and reported readings providers must develop is essential. Additionally, there is a need to develop a secure feedback loop that aligns with the Health Insurance Portability and Accountability Act (HIPAA) regulations. Health care providers can then incorporate patient data into the clinic’s Electronic Health Record (EHR) system will allow the tracking of regular communication of SMBP readings and ensure timely treatment advice and modifications made between patients and clinicians.

Develop secure portals with the ability to:
- Transmit patient SMBP readings to clinicians
- Request medication refills
- Create follow-up appointments
- Use secure messaging to contact clinical care team members
- Provide visit summaries with instructions for patients after they leave the clinic

<table>
<thead>
<tr>
<th>Health Information Technology (HIT) Provider Resources</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AHA Heart 360 Patient Portal</td>
<td>NextGen. Patient Portal</td>
</tr>
<tr>
<td>Microsoft HealthVault</td>
<td>Direct Project</td>
</tr>
<tr>
<td>HealthIT.gov.Patient Portal Increases Communication</td>
<td>U.S. Department of Health and Human Services</td>
</tr>
<tr>
<td>Between Patients and Providers</td>
<td>Summary of the HIPAA Privacy Rule</td>
</tr>
<tr>
<td><a href="http://go.usa.gov/fbhR">http://go.usa.gov/fbhR</a></td>
<td><a href="http://go.usa.gov/fbhd">http://go.usa.gov/fbhd</a></td>
</tr>
</tbody>
</table>
Figure 3. Illustrates the clinical support feedback loop between patients and clinicians in SMBP.
Patient Selection Criteria and Enrollment Process

For patients who exhibit consistently elevated blood pressure readings in the office and/or are at-risk for diagnosis of hypertension, self-monitoring blood pressure (SMBP) can be beneficial in recognizing white coat hypertension or true hypertension. Patients encounter white coat hypertension when their blood pressure is persistently elevated in the doctor’s office but blood pressure readings outside of the clinical setting are within normal range. Some patients can experience masked hypertension. Masked hypertension occurs when office blood pressures are normal, but out-of-office readings are elevated. This type of hypertension is considered dangerous, as the patient’s high blood pressure remains undetected and left untreated.

To detect masked hypertension in a patient or confirm diagnosis in a patient who exhibits elevated blood pressure readings in the office, it is best to have records of multiple readings over time. Clinicians compare readings due to the significant variability of the patient’s blood pressure readings over time. Implementation of a SMBP at home is widely accepted, and there is one protocol commonly used in guidelines.

Accurate diagnosis is based on the following criteria:

- Patient engages in self-measured blood pressure using a validated automated upper arm device and takes two readings (one minute apart) once in the morning and once in the evening over the course of at least four days.
- Clinicians take a cumulative average of all the measured systolic and diastolic blood pressures into a single average systolic and single average diastolic blood pressure.
- If the patient’s average systolic blood pressure (SBP) >135 mm Hg or diastolic blood pressure (DBP) >85 mm Hg then the patient meets the criteria for having hypertension.
- To confirm diagnosis of white coat hypertension or masked hypertension, the clinician can prescribe a 24-hour ambulatory blood pressure monitoring (ABPM) after implementing the SMBP method.
Patient Interaction – Communication

Clinicians are encouraged to discuss with patients the importance of effectively managing high blood pressure. Patients enrolled in SMBP learn to understand the link between measuring BP and controlling BP. The program empowers patients to take an active interest to appropriately control their BP instead of overmanaging based on a single reading. Patients are advised to adhere to strategies intended to manage hypertension, such as lifestyle and dietary modifications and medication.

At enrollment patients are informed of the methods preferred to communicate at-home readings back to clinical staff for interpretation and monitoring. Provide patients with a protocol to follow in the event of a concerning blood pressure reading, in the case the office is closed or not available to respond immediately. Blood pressure readings can be communicated back to the clinical care team in a multitude of ways:

- Instruct patient to report measurements by phone to the assigned clinical staff member.
- Instruct patient to fax or scan the blood pressure log to the office using a secure fax number.
- Instruct patient to log the measurements online through the physician office’s secure patient portal.
- Instruct the patient to log the measurement through a secure online tool, such as the American Heart Association’s Heart360 tool (heart360.org) or smartphone application.
- If the blood pressure devices include a memory storage feature, instruct the patient to bring the device to the office for clinical staff to review or download.
- Instruct the patient to schedule a follow-visit with physician upon completion of the home monitoring period is completed.

Patient Tracking – Documentation

Clinicians are advised to calculate the average blood pressure measurements performed by the patient using the complete log of readings reported to the office. The measurements should be averaged into a single reading that will be used to determine a diagnosis and/or guide treatment regimen. Once the clinician reviews the patient’s blood pressure reading log, document the average result in their medical records.

In receipt of patient data consider:

- If the patient submits the data with an average calculated, verify the method used to get the average.
  - Clinicians or clinical care staff should always verify manual calculations retrieved from the patient.
- Assess electronic medical record application to determine capability to automatically calculate the average measurement.
  - The capability of an electronic medical record system will vary. Check to determine automatic capabilities or if manual calculation is required.
Patient Management

SMBP is a useful tool for patients; it could help reduce hypertension among vulnerable populations for several reasons.

- Enables clinicians to improve disease management and better diagnose patients who exhibit elevated blood pressure measurements.
- Provides a history of blood pressure measurements over time; patients have a limited number of office visits.
- Improves treatment regimen and medication adherence given the evaluation of multiple measurements over time lead to accurate diagnosis of hypertension.
- Provides clinicians with a comprehensive overview of how well the patient is adapting to lifestyle changes such as diet and exercise.
- Clinicians gain insight on how well the medicines are working to control the patient’s high blood pressure outside of the office.
Selection Criteria for Home Blood Pressure Monitor

Home blood pressure monitors and cuffs used for SMBP range from manual (auscultatory) devices to partially or fully automated (oscillometric) devices. The use of automated devices is easy to use, requiring less skill to operate in comparison to the manual devices. Automated devices are widely available, and likely reduce error in home blood pressure measurements. Automated device types range from upper arm, wrist, and finger monitors, of which upper arm devices are recommended by the American Heart Association (AHA).

Choosing a blood pressure monitor

Patients purchasing their own blood pressure monitor for home should expect to pay in the range of $50 to $100 for the recommended upper arm blood pressure monitor. Patients are advised to use the upper arm blood pressure monitor for accuracy of measurement. The use of wrist cuffs is acceptable as an alternative for patients with a large arm circumference or who have difficulties using upper arm cuffs. The blood pressure reading from the wrist cuff is less accurate and may be inconsistent with the more accurate upper arm cuff measurement.

Prior to implementation of the SMBP, patients are encouraged to bring their blood pressure monitoring device in for comparison with in-office readings administered by clinical care staff. Clinicians can use this time to answer questions and educate patients about proper techniques used to blood pressure devices.

Selecting the best blood pressure device, consider a blood pressure monitor certified by one of these organizations:

- Association for the Advancement of Medical Instrumentation
- British Hypertension Society
- European Society of Hypertension

Learn more about certified monitors visit http://tinyurl.com/mxuvn7v
### Recommended Characteristics of Home Blood Pressure Monitor

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Not Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated</td>
<td>Manual</td>
</tr>
<tr>
<td>Upper arm cuff</td>
<td>Wrist Cuff*</td>
</tr>
<tr>
<td>(if patient’s arm circumference is too large – wrist device with adequate technique is acceptable)</td>
<td></td>
</tr>
<tr>
<td>Properly sized cuff</td>
<td>Too-large or too-small cuff</td>
</tr>
<tr>
<td>Memory storage capacity</td>
<td>No memory storage</td>
</tr>
<tr>
<td>(at least 30 BP readings)</td>
<td></td>
</tr>
<tr>
<td>Printing capacity</td>
<td>No printer</td>
</tr>
<tr>
<td>Ability to upload BP readings to computer or other electronic device</td>
<td>No ability to upload</td>
</tr>
<tr>
<td>Accuracy checked by clinician after purchase</td>
<td>Patient uses monitor without consulting clinician</td>
</tr>
</tbody>
</table>

#### Recommended cuff sizes for accurate measurement of blood pressure

<table>
<thead>
<tr>
<th>Arm Circumference</th>
<th>Cuff Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 to 26 cm</td>
<td>12x22 cm (small adult)</td>
</tr>
<tr>
<td>27 to 34 cm</td>
<td>16x30 cm (adult)</td>
</tr>
<tr>
<td>35 to 44 cm</td>
<td>16x36 cm (large adult)</td>
</tr>
<tr>
<td>45-52 cm</td>
<td>16x42 cm (extra-large adult)</td>
</tr>
<tr>
<td>&gt; 52 cm/20.5in</td>
<td>Wrist cuff</td>
</tr>
</tbody>
</table>

*Most devices have variable size cuffs that will fit majority of arms from the small adult to large adult range. Review devices specifications for the range of arm circumference covered to reduce error in blood pressure measurement, by use of an improperly sized cuff.*
Self-Monitoring
Blood Pressure Techniques

Steps to Obtaining an Accurate Blood Pressure

Patients are trained to follow certain steps to help obtain an accurate blood pressure measurement. The clinical care staff will give patient participants instructions on how frequently to take blood pressure readings. Patients are advised to adhere to the advice of their doctor. Typically, patients will perform two blood pressure measurements in the morning and two more in the evening for a duration of one to two weeks. Plan to have patients track readings and review their results with their clinician, clinical care staff, or community health worker. The clinician will decide the method of communication between them and the patient and may elect to communicate over phone, during an office visit, or using the patient portal on a computer accessible to the patient.

To measure blood pressure accurately, it is important that the patient follows certain steps to ensure the most accurate reading. Have patients follow these guidelines to help make sure that blood pressure is measured correctly every time. Sometimes, patients share monitors with multiple users in the home; advise patients to follow the manufacturer’s instructions for switching the user.

Steps to prepare to measure blood pressure:

- Have patient measure their blood pressure prior to taking their medication in the morning and evening.
- Avoid exercise, caffeine, alcohol consumption, and decongestants 30 minutes before blood pressure measurement.
- Do not smoke cigarettes within 30 minutes of measuring blood pressure.
- Use the bathroom if needed.
- Rest in a comfortable sitting position for five minutes, do not cross legs or ankles. Both feet should be flat on the floor.
- Sit in a chair with both feet flat on the floor and back supported against the chair.
- Refrain from talking, reading, or watching television while blood pressure is taken.

Correct posture for measuring blood pressure:

- Rest in a comfortable sitting position for five minutes.
- Do not cross legs or ankles.
- Position both feet flat on the floor.
- Rest with back supported against the chair.
- Rest arm supported on a table or another flat surface positioned at heart level. Arm should stay stretched out and relaxed. The patient should remain still while blood pressure is taken.
- When patient is ready to take blood pressure, ask the patient to press the button to start the device. The cuff will inflate and slowly deflate by itself.
After the machine has stopped measuring blood pressure:

- The machine will display the patient’s blood pressure reading. The two numbers on the display represent the systolic blood pressure (top number) and diastolic blood pressure (bottom number). Record the date, time, and result of the blood pressure reading if the machine does not have internal storing capabilities.
- The device should be stored in a safe and dry place.
- Patients are advised to follow the guidelines instituted by the provider or clinical care team provided for reporting blood pressure readings. Instruct them to track readings on a written log or blood pressure machine for review at their next doctor’s office visit.

For additional information on accurately taking blood pressure, see Appendix D “How to Measure Blood Pressure Accurately at Home” handout.

**Blood Pressure Measurement Protocol**

To help clinicians manage patients with uncontrolled blood pressure, the use of SMBP readings can help assess the effects of antihypertensive treatment, medication changes, and lifestyle modifications. Clinicians should routinely monitor blood pressure measurement technique protocols and conduct retrain when needed, or trainings at regular intervals. Additionally, clinicians should monitor care team staff competency in several aspects of accurate measurement technique. According to the international guidelines, optimal protocol for obtaining an accurate history of a patient’s blood pressure should include:

- Instructing the patient to take two or three measurements, each one minute apart, in the morning and again in the evening.
- Suggesting that the patient monitor their blood pressure for seven days; minimum of three days.
- Clinician should calculate average measurements based on patients recording log.
# Blood Pressure Variability

<table>
<thead>
<tr>
<th>Factor</th>
<th>Systolic (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuff too small</td>
<td>10-40 ↑</td>
</tr>
<tr>
<td>Cuff over clothing</td>
<td>10-40 ↑ or ↓</td>
</tr>
<tr>
<td>Back/feet unsupported</td>
<td>5-15 ↑</td>
</tr>
<tr>
<td>Legs crossed</td>
<td>5-8 ↑</td>
</tr>
<tr>
<td>Arm tense</td>
<td>15 ↑</td>
</tr>
<tr>
<td>Not resting 3 to 5 minutes</td>
<td>10-20 ↑</td>
</tr>
<tr>
<td>Patient talking</td>
<td>10-15 ↑</td>
</tr>
<tr>
<td>Full bladder</td>
<td>10-15 ↑</td>
</tr>
<tr>
<td>Arm below or above heart level</td>
<td>10 ↑ or ↓ For every 1 cm above or below heart level, blood pressure varies by 0.8 mmHg</td>
</tr>
</tbody>
</table>

## Diastolic (mmHg)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Diastolic (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm extended and unsupported</td>
<td>Diastolic ↑ 10%</td>
</tr>
</tbody>
</table>
Conclusion

The SMBP program step-by-step guide provides a comprehensive plan outlined with strategies clinicians can integrate to support implementation for a successful SMBP program. These strategies can help clinicians empower patients to be actively engaged in the management of their blood pressure outside of the clinical setting. Clinical care team support can play an integral role in educating patients on hypertension, proper techniques to measure blood pressure accurately, and coordination of a feedback loop between clinicians and patients. The development of a SMBP program can become a regular part of clinical support in the office. Routine patient SMBP interventions are among the ways clinicians can improve outcomes and make hypertension control a priority.
References


5. CMS. Q10 Fact Sheet. http://go.use.gov/fbHC


Health Care Provider Resources

Steps to Obtaining an Accurate Blood Pressure

Taking Blood Pressure Manually

What the Readings Mean

High Blood Pressure Algorithm
• http://www.heart.org/idc/groups/heart-public/@wcm/@mwa/documents/downloadable/ucm_481453.pdf
Steps to Obtaining an Accurate Blood Pressure

> Choose the right size cuff
> Seat your patient so their back is supported
> Make sure the patient’s feet are resting on a flat surface
> The patient’s legs should be uncrossed
> The patient should not be speaking while obtaining the pressure
> Make sure your patient’s left arm is raised to heart level and supported
> Expose the patient’s bare arm
> Inflate the cuff to 160 mm Hg of pressure (only proceed higher if the patient is known to have high blood pressure)
> Place the diaphragm over the brachial artery and clear of obstruction

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>American Heart Association Recommended Blood Pressure Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systolic (mm Hg)</td>
</tr>
<tr>
<td>Normal</td>
<td>Less than 120</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120-139</td>
</tr>
<tr>
<td>High</td>
<td>140 or greater</td>
</tr>
<tr>
<td>Stage 1</td>
<td>140-159</td>
</tr>
<tr>
<td>Stage 2</td>
<td>160 or higher</td>
</tr>
</tbody>
</table>
Blood pressure goal. Look at all your risk factors and give you a blood pressure goal. Your healthcare provider should ask you if you have any risk factors for high blood pressure. If yes, they will discuss how to control your blood pressure. If not, they will give you general advice on how to lower your blood pressure. The goal is to keep your blood pressure below 120/80 mmHg. If you are already taking medication, your healthcare provider will adjust the amount as needed. If you are not already taking medication, your healthcare provider will likely recommend lifestyle changes such as losing weight, eating a healthy diet, and exercising regularly.

Make sure you are measuring your blood pressure accurately.

You should have your monitor’s accuracy tested once a year by a healthcare professional.

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Stage 1</th>
<th>Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diastolic</td>
<td>90-99</td>
<td>100 or higher</td>
</tr>
<tr>
<td>Systolic</td>
<td>110-129</td>
<td>130 or higher</td>
</tr>
</tbody>
</table>

Blood pressure higher than 120/80 mmHg is not normal and may be an emergency. Call 9-1-1 immediately. If 9-1-1 is not available, have someone drive you to the nearest emergency facility.

Heart rate of pulse is the number of times your heart beats per minute. The average resting heart rate is 60-80 beats per minute. The average raising heart rate is 100 beats per minute.

Blood pressure higher than 180/110 mmHg is an emergency.

Immediately, someone drive you to the nearest emergency facility.

Call 9-1-1 immediately. If 9-1-1 is not available, have someone drive you to the nearest emergency facility.

Immediately, someone drive you to the nearest emergency facility.

Call 9-1-1 immediately. If 9-1-1 is not available, have someone drive you to the nearest emergency facility.
**BLOOD PRESSURE TRACKER - PRINTABLE TRACKER**

**INSTRUCTIONS:**

- Take your pressure at the same time each day, such as morning or evening, or as your healthcare professional recommends.
- Sit with your back straight and supported and your feet flat on the floor.
- Your arm should be supported on a flat surface with the upper arm at heart level.
- Make sure the middle of the cuff is placed directly over your brachial artery. Refer to the Instructions page of this tracker for a picture, or check your monitor’s instructions, or have your healthcare provider show you how.
- Each time you measure, take two or three readings, one minute apart, and record all the results.

**NAME: ___________________________**

**MY BLOOD PRESSURE TARGET GOAL IS: ___/___ mm Hg**

<table>
<thead>
<tr>
<th>DATE/TIME</th>
<th>READING 1</th>
<th>READING 2</th>
<th>READING 3</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BLOOD PRESSURE</td>
<td>HEART RATE (PULSE)</td>
<td>BLOOD PRESSURE</td>
<td>HEART RATE (PULSE)</td>
</tr>
<tr>
<td>1/1/08 8:00pm</td>
<td>132/85 mm Hg 81 Beats Per Min.</td>
<td>130/80 mm Hg 70 Beats Per Min.</td>
<td>126/80 mm Hg 72 Beats Per Min.</td>
<td>at pharmacy</td>
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Blood pressure higher than 180/110 is an emergency. Call 9-1-1 immediately. If 9-1-1 is not available to you, have someone drive you to the nearest emergency facility immediately.
### Instructions:

- Cut this card out, fold it and keep in your wallet for use when traveling or away from home.
- Roll up the upper arm at heart level.
- Your arm should be supported on a flat surface with the upper arm at heart level.
- Sit with your back straight and supported and your feet flat on the floor.
- Each time you measure, take two or three readings.
- Sit with your back straight and supported and your feet flat on the floor.
- Make sure the middle of the cuff is placed directly over your brachial artery. Refer to the instructions page of this tracker for a picture or check your monitor’s instructions.
- Professional recommendations:
  - Morning or evening, or as your healthcare provider recommends.
- **Blood pressure** higher than 180/110 is an emergency. Call 9-1-1 immediately. If 9-1-1 is not available to you, have someone drive you to the nearest emergency facility immediately.

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<table>
<thead>
<tr>
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<th>Reading 3</th>
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Blood Pressure Tracker - Wallet Card

© 2012 American Heart Association, Inc.
Taking Blood Pressure Manually

1. **Check the condition of the device and the cuff size to ensure the reading is accurate.** A small hole or crack in any part of the device, e.g., rubber tubing, bulb, valves, and cuff can lead to inaccurate results. A cuff that is too small or too big may produce an incorrect high blood pressure reading.

2. **It’s important the patient feels comfortable and relaxed.** Reassure the patient that there are no risks or complications associated with this screening.

3. **Have the patient relax and sit with their arm slightly bent on the same level as their heart and resting comfortably on a table or other flat surface.**

4. **Place the inflatable blood pressure cuff securely on the upper arm (approximately one inch above the bend of the elbow).** Make sure the cuff is touching the skin. You may have to ask your patient roll up their sleeve, or remove their arm from the sleeve.

5. **Close the pressure valve on the rubber inflating bulb, and pump the bulb rapidly to inflate the cuff.** The cuff should be inflated so that the dial reads about 30 mm Hg higher than your patient’s at-rest systolic pressure. (TIP: If at-rest pressure is unknown, inflate the cuff to 210 mm Hg or until the pulse at the wrist disappears).

6. **If using a stethoscope, place the earpieces in your ears and the bell of the stethoscope over the artery, just below the cuff.** If the cuff has a built-in stethoscope bell, be sure to position the cuff so the bell is over the artery. The accuracy of a blood pressure recording depends on the correct positioning of the stethoscope over the artery, and making sure the stethoscope bell does not rub on the cuff or the patient’s clothing.

7. **Now slowly release the pressure by twisting or pressing open the pressure valve, located on the bulb.** Some blood pressure devices can automatically control the rate at which the pressure falls, but generally the patient’s pressure should decrease about 2 to 3 mm Hg per second. Listen through the stethoscope and note on the dial when you **first start to hear a pulsing or tapping sound**—this is the **systolic blood pressure**. If you have trouble hearing the start of the pulse, you can find the patient’s systolic blood pressure by asking your patient to tell you when they can start to feel the pulse in their wrist and noting the level on the dial.

8. **Continue letting the air out slowly.** The pulsing or tapping sounds will become dulled and finally disappear. Note on the dial **when the sounds completely stop**—this is the **diastolic blood pressure**. Finally, release the remaining air to relieve all pressure on your patient’s arm.

9. **Suggest the patient write down their numbers along with the date and time.** They can use the **Team Up, Pressure Down**. journal to keep track. Remind the patient to take their blood pressure regularly to ensure their medications are working appropriately.
What the Readings Mean

Use this chart to help interpret blood pressure readings and provide recommendations to your patient. Remember, more than one reading is needed to accurately measure blood pressure and offer the greatest benefits.

<table>
<thead>
<tr>
<th>STAGE 2 HYPERTENSION</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>&gt; (or equal to) 160 mmHg OR &gt; (or equal to) 100 mmHg</td>
<td>Patient has hypertension and should seek medical care as soon as possible. If patient is not currently under the care of a physician, refer him/her to a primary care provider, and offer to make the call for them. If patient is currently taking hypertension medication(s), determine if he/she is adherent to the prescribed drug regimen. If adherent, make therapeutic suggestions to the patient and his/her provider to improve control. If not, determine existing adherence barriers and suggest ways for the patient to improve their compliance.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAGE 1 HYPERTENSION</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>140-159 mmHg OR 90-99 mmHg</td>
<td>Patient has hypertension and should seek medical care. If patient is not currently under the care of a physician, refer him/her to a primary care provider. If patient is currently taking hypertension medication(s), determine if he/she is adherent to the prescribed drug regimen. If adherent, make therapeutic suggestions to the patient and his/her provider to improve control. If not, determine existing adherence barriers and suggest ways for the patient to improve compliance.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PREHYPERTENSION</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>120-139 mmHg OR 80-89 mmHg</td>
<td>Patient has an increased risk of future hypertension. Suggest that the patient make lifestyle modifications and regularly monitor blood pressure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NORMAL</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>&lt; 120 mmHg AND &lt;80 mmHg</td>
<td>Encourage healthy behaviors and lifestyle modifications to keep blood pressure in normal range.</td>
</tr>
</tbody>
</table>

In setting a new threshold for high blood pressure (HBP), the 2017 Hypertension Clinical Practice Guideline leads to a substantial increase in the prevalence of hypertension but only a slight increase in the number of adults for whom antihypertensive medication will be recommended.2 A team-based approach to care is recommended. Such an approach has been associated with lower systolic and diastolic measurements as well as an increased proportion of people with controlled BP.8 Teams consisting of physicians, nurses, physician assistants and pharmacists can have the greatest impact on improving the monitoring and management of blood pressure.9,10

Guideline Highlights

Normal BP: <120/80 mm Hg

Managing elevated BP: 120-129/<80 mm Hg

Recommendations

• Use the ASCVD risk calculator to assess 10-year risk for heart disease and stroke in patients with stage 1 hypertension.
• Review standards for accurate measurement of BP, including appropriate cuff size.
• Encourage your patient to self-monitor BP.

Find more tools to help you integrate the guidelines into practice at heart.org/bptools.

REFERENCES


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REASSESSMENT CHECKLIST

- Measure BP
- Identify white-coat hypertension or a white-coat effect
- Document adherence to treatment
- Reinforce importance of treatment
- Assist with treatment to achieve BP target
- Evaluate for orthostatic hypotension in select patients (eg, older or with postural symptoms)
- Talk to your patients about substances that should be avoided, limited or stopped to help maintain a healthy BP.

BP thresholds and recommendations for treatment and follow-up

**Normal BP** (BP<120/80 mm Hg)
- Promote optimal lifestyle habits
- Reassess in 1 year (Class IIa)

**Elevated BP** (BP 120-129/<80 mm Hg)
- Nonpharmacologic therapy (Class I)
- Reassess in 3-6 mo. (Class I)

**Stage 1 hypertension** (BP 130-139/80-89 mm Hg)
- Nonpharmacologic therapy (Class I)
- Reassess in 3-6 mo. (Class I)

**Stage 2 hypertension** (BP ≥140/90 mm Hg)
- Nonpharmacologic therapy and BP-lowering medication (Class I)
- Reassess in 1 mo. (Class I)

Clinical ASCVD or estimated 10-y CVD risk ≥10%
- No
- Yes

- BP Goal Met
  - No
  - Yes

Consider intensification of therapy

Assess and optimize adherence to therapy

Reassess in 3-6 mo. (Class I)

Optimal lifestyle habits
- Healthy diet
- Weight loss, if needed
- Physical activity
- Tobacco cessation, if needed
- Moderation of alcohol consumption

Nonpharmacologic therapy
- Weight loss for patients who are overweight or obese
- Heart-healthy diet (such as DASH)
- Sodium restriction
- Potassium supplementation (preferably in dietary modification)\(^a\)
- Increased physical activity with structured exercise program
- Limitation of alcohol to 1 (women) or 2 (men) standard drinks per day\(^b\)

\(^a\) Unless contraindicated by the presence of chronic kidney disease or use of drugs that reduce potassium excretion.

\(^b\) In the United States, one standard drink is equivalent to 12 oz of regular beer (usually about 5% alcohol), 5 oz of wine (usually about 12% alcohol), or 1.5 oz of distilled spirits (usually about 40% alcohol).
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Patient Resource Materials

What You Need to Know about High Blood Pressure

Supporting Your Loved One with High Blood Pressure (English/Spanish)
• https://millionhearts.hhs.gov/files/TipSheet_LovedOne_General.pdf
• https://millionhearts.hhs.gov/files/TipSheet_LovedOne_Spanish.pdf

I Will Take My Meds Commitment Card

A Journal to Help You Manage High Blood Pressure
You have the power to lower your blood pressure and live a healthy, full life. High blood pressure, which is also called hypertension, raises your risk for heart disease, stroke, kidney disease and eye damage.

**IMPORTANT NOTE:** Always contact your nurse or doctor if your systolic pressure is above 180 or if your diastolic pressure is above 110.

**Eat less salt**

Lower your blood pressure by eating less salt, which is called sodium on food labels. Eat no more than 2300 mg of sodium each day, which is less than a teaspoon. Less than 1500 mg a day is best.

Most of the sodium we eat comes from packaged or restaurant foods. You might be surprised at the large amounts in bread, packaged foods, cheese, processed meats and cold cuts, pasta dishes, sauces and salty snacks.

**How to read a food label:**
1. Look at the serving size and servings per container. This item has 2 servings.
2. Look at the mg of sodium. In this can, a 1 cup serving has 400mg of sodium. This whole can has 800mg of sodium.

**What do your blood pressure numbers mean?**

<table>
<thead>
<tr>
<th>Blood Pressure</th>
<th>Systolic</th>
<th>Diastolic</th>
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</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Less than 120</td>
<td>Less than 80</td>
</tr>
<tr>
<td>Elevated blood</td>
<td>120-129</td>
<td></td>
</tr>
<tr>
<td>High blood pressure</td>
<td>130 or higher</td>
<td>80 or higher</td>
</tr>
</tbody>
</table>

Write your recent numbers here: _____ / _____

**IMPORTANT NOTE:** Always contact your nurse or doctor if your systolic pressure is above 180 or if your diastolic pressure is above 110.

☑ **Check off the things you will do:**
- Check food labels for sodium levels.
- Eat more fresh fruits and vegetables.
- Use herbs and spices instead of salt.
- Use water to rinse canned foods like vegetables, beans and tuna to remove salty liquid.
- For salads, choose oil and vinegar. When eating out, ask for dressing on the side.
- Choose reduced sodium, low sodium, light sodium, or sodium-free foods.
Check your blood pressure at home

Checking your blood pressure at home will help your nurse or doctor know if your numbers are normal or high. Ask your doctor or nurse to help you find a home blood pressure monitor. Don’t use finger or wrist monitors.

The first time you take your blood pressure at home, do it on both arms. After that, use the arm that had the highest numbers.

How to check your blood pressure:

1. Use a cuff that fits your arm (example: adult, large, or extra large). Ask your doctor or nurse what size to use.
2. Rest for 5 minutes before you take your blood pressure.
3. Wait for at least 30 minutes after drinking alcohol or caffeine, smoking or exercising before you take a reading.
4. Sit with your legs uncrossed, your back supported, and your feet on the floor. Rest your arm at heart level on a table.
5. Take your blood pressure twice a day for 7 days. Save your numbers on the machine or write them down to show to your nurse or doctor.

Learn about your medicines

Most people with high blood pressure need at least 2 medicines to lower their blood pressure to a healthy level.

Your doctor or nurse may need to change your medicines to find what works best for you. This is normal.

☑ Check off the things you will do:

☐ Ask your doctor or nurse if there is a best time to take your medicines, like before or after a meal, in the morning, or at night.
☐ Always use a pill box, even if you only take one pill each day. Make sure your pill box is stored in a place where you can see it.
☐ Take your pills at the same time each day. Use a timer or alarm on your watch or phone as a reminder.
☐ Write down your medicines and always carry this list with you. Show it to your doctor or nurse at each visit.
☐ Write down on your calendar when you need to refill your medicine—at least 1-2 weeks before you run out.
☐ If you don’t feel well after taking a medicine, call your doctor or nurse.
☐ Don’t stop taking your medicines until you talk with your doctor or nurse.
Supporting Your Loved One with High Blood Pressure

Having the support of a friend or family member sometimes is the deciding factor for an individual struggling to manage and control high blood pressure successfully. You can make a difference.

Of the 75 million American adults who have high blood pressure, only about half (54%) of these people have their blood pressure under control. If this sounds like someone you know and love, team up with him or her to make blood pressure control your goal, too.

Here are tips on how you can help:

Start the conversation
Find out what your loved one is already doing to control their high blood pressure and what you can do to support them immediately. Ask questions like the following:

- What is hardest for you about controlling your high blood pressure?
- What is easiest?
- Have you set specific goals with your health care team?
- What can I do to help you? This might include going with you to health care visits; helping you monitor your blood pressure; reminding you to take your medications; and working together to cook low sodium meals.

Provide emotional support

- Be positive. Help your loved one remember that this is a marathon, not a sprint, and that control is possible.
- If you are concerned about your loved one, ask him or her questions.
- Don’t forget to take care of yourself. As a family member or friend taking care of a loved one with high blood pressure, you may experience periods of stress, anxiety, depression, and frustration. Remember, taking care of your own emotional health and physical needs helps you take care of your loved one.
Make control your goal

Take action to help your loved one make healthy lifestyle changes for better blood pressure control. For example, you can do the following:

► Help your loved one set up a routine to take medications regularly.
  ► If your loved one’s insurance provides mail order delivery, set it up and request a 90-day supply of medications.
  ► If this service is not available, pick a convenient pharmacy to get all of the medications. Request that refills occur at the same time each month so your loved one can pick them all up at once.
  ► Start a reminder system. Use a pillbox for every pill, every day. Or find and use a smartphone app.

► Set a reminder to get your loved one’s blood pressure checked—at home, at the doctor’s office, or at a pharmacy. Track results in a journal or diary that your loved one can take to health care visits.

► Help your loved one eat better.
  ► Go grocery shopping together. Focus on more fresh fruit, vegetables, and whole grains and fewer prepared foods that have high sodium, cholesterol, saturated fat, and trans fat.
  ► Help cook healthy, tasty meals at home more often. Bring home-cooked meals to your loved one.

► If your loved one smokes, help him or her quit.
  ► Help your loved one identify reasons to quit.
  ► Learn about and improve upon your loved one’s previous attempts to quit.
  ► Suggest a quitline like 1-800-QUIT-NOW.

► Be more active with your loved one.
  ► Schedule easy exercises into your daily or weekly get-togethers—even just a walk around the block is enough to get the ball rolling.
  ► Keep track of your daily and weekly physical activity by using a log or diary.
  ► Increase the time and intensity of your physical activity gradually as you progress.

Be positive. Help your loved one remember that this is a marathon, not a sprint, and that control is possible.

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Million Hearts® is a national initiative to prevent 1 million heart attacks and strokes by 2017. It is led by the Centers for Disease Control and Prevention and the Centers for Medicare & Medicaid Services, two agencies of the Department of Health and Human Services.

millionhearts.hhs.gov

Find and download additional materials to support loved ones in controlling high blood pressure at the Million Hearts® website.

Source: http://www.cdc.gov/bloodpressure/facts.htm

May 2016
Cómo apoyar a un ser querido con Presión arterial alta

Contar con el apoyo de un amigo o familiar es a veces el factor decisivo para alguien que lucha por manejar y controlar su presión arterial alta. Usted puede ayudar.

De los 67 millones de adultos con presión arterial alta en los Estados Unidos, 16 millones saben que tienen esta afección y están recibiendo tratamiento, pero siguen teniendo la presión alta. Si esto le recuerda a algún ser querido o a alguien que usted conoce, póngase de su lado y haga que el control de la presión arterial también sea su meta.

A continuación hay algunos consejos sobre cómo puede ayudar:

**Inicie la conversación**

Averigüe qué está haciendo su ser querido para controlar la presión arterial alta y qué puede hacer usted para apoyarlo inmediatamente. Haga preguntas como las siguientes:

- ¿Qué es lo que te resulta más difícil para controlar la presión arterial alta?
- ¿Qué es lo más fácil?
- ¿Has establecido metas específicas con tu equipo de salud?
- ¿En qué te puedo ayudar? (Esto puede incluir acompañarte a las citas médicas, ayudarte a tomar la presión arterial, recordarte que te tomes los medicamentos, cocinar juntos comidas con bajo contenido de sodio).

**Dé apoyo emocional**

- Sea positivo; ayude a su ser querido a recordar que esto es una maratón, no una carrera, y que es posible controlar la presión arterial alta.
- Si está preocupado por su ser querido, hágale preguntas.
- Recuerde que usted también tiene que cuidarse. Al cuidar a un familiar o a un amigo con presión arterial alta, usted puede pasar por periodos de estrés, ansiedad, depresión y frustración. Recuerde que prestar atención a su propia salud emocional y atender sus propias necesidades físicas lo ayudan a cuidar a su ser querido.

Haga que el control sea su meta
Haga que el control sea su meta

Tome medidas para ayudar a su ser querido a hacer cambios saludables en su estilo de vida para controlar mejor la presión arterial. Por ejemplo, usted puede:

- **Ayudar a su ser querido a establecer una rutina para que se tome sus medicamentos con regularidad.**
- **Si el seguro médico de su ser querido ofrece entrega a domicilio, programe el envío y pida que le manden medicamentos para 90 días.**
- **Si este servicio no está disponible, escoja una farmacia que quede cerca para conseguir todos los medicamentos. Pida que le entreguen los surtidos en la misma fecha, cada mes, para que se puedan recoger todos al mismo tiempo.**
- **Establezca un sistema recordatorio: use un pastillero para cada pastilla, todos los días, o busque y use una aplicación (app) para el teléfono inteligente.**
- **Hacerse un recordatorio para que a su ser querido le tomen la presión arterial en su casa, en el consultorio del médico o en una farmacia. Anote los resultados en un diario o cuaderno que su ser querido pueda llevar a las citas médicas.**
- **Ayudar a su ser querido a alimentarse mejor.**
  - **Vayan al juntos al supermercado. Compren más frutas frescas, verduras y cereales integrales, y menos comidas preparadas que tienen altos niveles de sodio, colesterol, grasas saturadas y grasas trans.**
  - **Ayude a cocinar en casa comidas sanas y sabrosas con más frecuencia. Llévele a su ser querido comidas hechas en casa.**
- **Ayudar a su ser querido a dejar de fumar.**
  - **Ayúdelo a encontrar razones para dejar de fumar.**
  - **Infórmese sobre los intentos que ha hecho su ser querido para dejar de fumar y trate de hacer cosas que puedan funcionar mejor.**
  - **Recomiéndele que llame a una línea telefónica de ayuda para dejar de fumar como 1-855-DÉJELO-YA. Seleccione la opción 2 para hablar con un representante en español.**
- **Ser más activo con su ser querido.**
  - **Programe hacer ejercicios fáciles cuando se vean diariamente o cada semana. Incluso salir a caminar alrededor de la cuadra es suficiente para empezar.**
  - **Lleve un registro diario y semanal de la actividad física en un cuaderno o diario.**
  - **Aumente gradualmente la duración e intensidad de la actividad física a medida que vayan avanzando.**

Encuentre y descargue materiales adicionales para ayudar a su ser querido a controlar la presión arterial alta en el sitio web **Million Hearts® en español.**
I WILL SIGN HERE

TAKE MY MEDS.

QUESTIONS to ask my doctor/pharmacist
1. What's my medicine called and what does it do?
2. How and when should I take it? And for how long?
3. What if I miss a dose?
4. Are there any side effects?
5. Is it safe to take it with other medicine or vitamins?
6. Can I stop taking it if I feel better?

List medicines here.
Keep it up to date.
Carry it with you.
Share with your doctor/pharmacist.
Always take your medicine as directed.

For helpful tips and resources, visit ScriptYourFuture.org today.

Million Hearts™ Team Up. Pressure Down. word and logo marks are owned by the U.S. Department of Health and Human Services (HHS). Participation does not imply endorsement by HHS.
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<th>REFILL DATE</th>
<th>HOW MUCH DO I TAKE?</th>
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<td>7/1/11</td>
<td>1 tablet, 250 mg</td>
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A JOURNAL TO HELP YOU
MANAGE HIGH BLOOD PRESSURE
Blood pressure can be controlled. Make it a team effort.

So team up with your pharmacist, your doctor, and loved ones to get—and keep—your high blood pressure down. Your pharmacist and health care providers can help save your life. Use this journal to get tips on healthy habits that will help you manage and control your high blood pressure. You will also learn how you can maintain healthy blood pressure and what questions to ask your pharmacist about your condition or medication. With the help of this journal, you will learn about your condition or medication, and how you can manage and control your high blood pressure. You will also learn what questions to ask your pharmacist or doctor if you are worried about your high blood pressure or medications.

Keep your blood pressure and health goals on a daily basis to help you reach your goals. Your pharmacist can help you stay on track by providing advice and tips for managing your condition. Your pharmacist can also answer questions about your medications and offer advice on healthy habits that can help you manage your blood pressure. Use this journal to help you reach your blood pressure and health goals.

Blood pressure, also called hypertension, raises your risk of heart disease, stroke, and other serious conditions. So it's very important to take the medication your doctor has prescribed. Those are the first steps to getting your high blood pressure under control. It's also important to take action to control your blood pressure. High blood pressure, also called hypertension, raises your risk of heart disease, stroke, and other serious conditions. So team up with your pharmacist, your doctor, and loved ones to get—and keep—your high blood pressure down.
If you have high blood pressure, you’re not alone. About 67 million U.S. adults have high blood pressure. Nearly half do not have it under control. High blood pressure, a common cause of heart attack and stroke, contributes to nearly 1,000 deaths a day.

“Blood pressure” measures the force of your blood pushing against the walls of your arteries. Your blood pressure naturally goes up and down throughout the day. If it remains high for a long time, you could have high blood pressure.

High blood pressure is unsafe because it makes your heart work harder to pump blood. This can cause damage to the arteries and makes you more likely to experience a heart attack or stroke.
What causes high blood pressure?

The causes of high blood pressure vary from person to person. Risk factors, such as certain traits, conditions, and habits, can raise your risk. There are two types of risk factors: those you can control and those you cannot control.

Risk factors you can control include:

- Being overweight
- Too much salt
- Drinking too much alcohol
- Not being physically active
- Smoking
- Diabetes
- Stress
- Too little potassium

Risk factors you cannot control include:

- Age: Blood pressure tends to rise as people get older.
- Race/ethnicity: High blood pressure is more common among African-American adults than Caucasians or Hispanic-American adults.
- Gender: Fewer adult women have high blood pressure than adult men.
- Family history: You are more likely to have high blood pressure if someone in your family has it.

For some people, certain medical conditions and medications can cause or add to the risk. For others, habits such as smoking or drinking too much alcohol may cause high blood pressure.

Blood pressure tends to rise as people get older.

High blood pressure is more common among African-American adults than Caucasians or Hispanic-American adults.

Fewer adult women have high blood pressure than adult men.

You are more likely to have high blood pressure if someone in your family has it.
What are the signs of high blood pressure?

High blood pressure is also called the “silent killer,” because many people have it for years and don’t know it. Often, high blood pressure has no warning signs. By the time it is noticed, it may have already caused serious damage to the heart, blood vessels, and more.

The good news is, when discovered early, high blood pressure can be treated and controlled.

Lifestyle changes can help lower and maintain a healthy blood pressure. Staying on a healthy diet, being physically active, keeping a healthy weight, and not smoking can help you stop or delay problems related to high blood pressure. Keep in mind, the more risk factors you have, the more likely you are to get high blood pressure.
How is high blood pressure measured?

When you get your blood pressure taken by a professional, it’s helpful to know what is being measured and how you can track your blood pressure regularly.

Blood pressure is when the heart fills up with blood and then squeezes to push the blood into the blood vessels. Your blood pressure is made up of two numbers—systolic pressure and diastolic pressure. The systolic number is when the heart fills up with blood and then squeezes to push the blood into the blood vessels. Your blood pressure is measured in millimeters of mercury (mmHg).

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Work with your pharmacist or doctor to learn what your numbers mean for your health. Depending on your starting level of systolic blood pressure you can, lower your risk of heart attack or stroke by bringing that number down by at least 5mmHg.

To help you picture how blood pressure works, think of water running through a garden hose.

The hose is your blood vessels, and the water running through it is your blood. Just as you need plenty of water to grow your garden, your cells need enough blood to circulate in your body to carry oxygen and other things the body needs to stay alive. If you were to turn on the water to your garden hose, you would see it flow freely from one end to the other.

Now, if you were to narrow the flow of water by squeezing or stepping on the hose, the water pressure would build up. The faucet has to “work harder” to get the water through the hose to your garden. This causes extra stress on the faucet, which could cause it to leak or break and not work correctly. Similarly, if you have high blood pressure, it is like squeezing the garden hose. This makes your heart work harder to pump blood and your blood pressure rises. The extra work your heart has to do can cause stress on your heart and lead to a heart attack or stroke.
Who takes my blood pressure?

Taking your blood pressure is easy and painless. Your doctor or nurse will take it each time you visit—and maybe more than once. It is also important for you to regularly monitor your blood pressure. Many pharmacies have blood pressure machines where you can test yourself. You can also buy an easy-to-use blood pressure monitor from your drug store to use at home. To get the best picture of your blood pressure, measure it twice a day for at least a week. Take it once in the morning before you take any medications, and again in the evening.

Tips:

▼ Don’t drink coffee or smoke cigarettes for at least 30 minutes before the test. Doing either can cause a brief rise in blood pressure. Keep in mind, smoking is a common cause of high blood pressure. Keep in mind, smoking is a common cause of high blood pressure. If you do smoke, there are steps you can take to quit. Visit http://millionhearts.hhs.gov for tips and resources.

▼ Be sure to go to the bathroom before the test. A full bladder can affect your blood pressure reading.

▼ Sit quietly for five minutes before the test. Movement can cause a brief rise in your blood pressure. Keep in mind, movement can cause a brief rise in your blood pressure.

▼ Move quietly for five minutes before the test. Movement can cause a brief rise in your blood pressure.

It’s important to take the readings at the same time each day, because your blood pressure changes during the day. Try to be sure that you take it at the same time each day, because your blood pressure changes during the day. Also, be sure to take your readings before you take any medications.

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Tips:

▼ Don’t drink coffee or smoke cigarettes for at least 30 minutes before the test. Doing either can cause a brief rise in blood pressure. Keep in mind, smoking is a common cause of high blood pressure. If you do smoke, there are steps you can take to quit. Visit http://millionhearts.hhs.gov for tips and resources.

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Save your numbers on the machine, write them down in the chart on the next page, or record them on the wallet card available at http://millionhearts.hhs.gov. Include the time of day and how and where the reading was taken. Take these numbers along the next time you visit your pharmacist or doctor to help him/her determine if your medications are working well.

**TIP:** Make copies of this page before you write down your first reading, so you’ll have clean copies for future use.

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<th>LOCATION</th>
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How is high blood pressure controlled?

For some people, making healthy changes in their lives can help lower blood pressure. For others, medication may be needed as well. If your doctor gives you one or more medications as part of a treatment plan, be sure to take them as directed. Awareness and treatment are the best chances you have to control your high blood pressure and avoid a heart attack or stroke. Work with your pharmacist and doctor to make a plan that works best for you.
Some blood pressure medications work to remove fluid and sodium (salt) from the body. Too much sodium in your diet can cause your body to hold in fluid, which can raise blood pressure.

You can reduce your sodium levels by eating less canned and processed foods, ordering healthy meals when you eat out, and seasoning your food with herbs and spices instead of salt.

Other medications slow your heartbeat and relax blood vessels to improve blood flow. Your doctor will prescribe the type of medication that is best for you.

It is unlikely that you will have serious side effects from blood pressure medications. If you do have side effects that are troubling or don’t go away, be sure to talk to your pharmacist or doctor right away before you stop taking your medications as prescribed. They may change the dose or give you a different medication that will work better for you.
Your pharmacist can help you manage your high blood pressure. Did you know that your pharmacist can answer your general high blood pressure questions, and even help you take your blood pressure? Your pharmacist is not only trained to fill your prescriptions, but can help you better understand your condition and the medications you are taking.

If you are starting medication for the first time or if your treatment has changed, talk to your pharmacist. Here are some questions you may want to ask:

- What is the name of my medication? Is that the brand name or generic name?
- What is the dosage of the medication? Are there any special instructions? How will it react in my body?
- Can this medication be taken with other prescription and nonprescription medications?
- Should this medication be taken with or without food? Are there any foods or drinks to stay away from when taking this medication?
What should I do if I take too much or miss a dose of this medication?

What side effects should I watch for? If I contact you about possible side effects will you share that information with my doctor or do I need to contact my doctor separately?

Should I make sure to stay away from certain activities while taking this medication?

What time of day should I take my medication?

Are there any other things (such as blood pressure cuffs, pain medication, or vitamins) that may help me manage my blood pressure?

What can I do if I lose or run out of medication?

Where can I find out more about this drug(s) or my condition (on the Internet or in health and medical articles)?

Where on my pill bottle can I find the above information?
Notes from my talk with my pharmacist:

Questions for my pharmacist on my next visit:

It's hard to remember to get your medications refilled. Use the space below to write important information about your prescription and pharmacy. Use the space below to list information from the label of your pill bottle(s).

<table>
<thead>
<tr>
<th>PHONE NUMBER</th>
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</tbody>
</table>
Taking your medications as directed.

There are many reasons why you may not take your medications as prescribed, but remember it is very important to follow your doctor’s directions. Ask your pharmacist to remind you what your doctor told you about your prescription. Not taking your medicines as prescribed can have a serious impact on your overall health. If you are concerned about bad reactions or side effects, the high cost, or are overwhelmed by the number of medicines you have to take, talk with your pharmacist. He/she can discuss them with your doctor and together they might suggest:

- Other prescription medications or over-the-counter treatments that may have fewer side effects.
Ways to simplify your daily medication routine to cut down on the number of times a day and/or medications you take.

Generic medications available at a lower cost, or recommend a prescription assistance program to help you afford your medication.

What if I miss a day of taking my medications?

In general, missing one day isn’t serious. Ask your pharmacist what to do if that happens. Of course, it’s best to take your medication(s) regularly and schedule refills to make sure you have an automatic refill service or if they can call you before you run out.

Remind yourself:

- Put “sticky notes” on the refrigerator.
- Take them at the same time(s).
- Stand or next to your toothbrush.
- Keep your medications somewhere:
  - Bathroom mirror or front door
  - Put “sticky notes” on the refrigerator
  - By your toothbrush
  - Keep your medications somewhere

Remember:

- The medications you’re taking.
- Make sure you take the original labeled containers of pills you’ll need to make sure you have enough.
- If you are going on a trip, count out the number of refills you’ll need for the trip, count out the number of refills you’ll need for the trip when refills are due.
- Ask your pharmacist if they have an automatic refill service or if they can call you before you run out.
- If you have a computer or cell phone, set up a reminder or sign up for a free service that will remind you to refill your prescriptions. Make a note to order more medication one week before you run out.
- Remember to refill your prescriptions. Make a consultation request if they have an automatic refill service or if they can call you before you run out.
- Take your medications as prescribed. It’s best to take your medication(s) regularly and schedule refills to make sure you have an automatic refill service or if they can call you before you run out.
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What if I miss a day of taking my medications?

To help you afford your medication:
- Generic medications available at a lower cost.
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Are there natural ways to control blood pressure?

Medication is not and should not be the only way of managing high blood pressure. Lifestyle changes play a big part in controlling blood pressure—especially when combined with medication. Team up with your loved one and engage in healthy activities to reduce blood pressure. Here’s what you can do:

▲ **Enjoy a healthy diet.** Include plenty of fruits, vegetables, whole grains, low-fat dairy, fish, lean meats and poultry. Also make sure to get plenty of potassium. Bananas, orange juice, raisins, and baked potatoes are rich in potassium.

▲ **Eat a low-sodium diet.** Sodium (salt) raises blood pressure by keeping fluid in the body. Look carefully at the labels of processed foods (canned soups and frozen dinners), which are often very high in sodium. If you are 51 or older, limit sodium to 1,500 milligrams a day or less.

▲ **Keep your weight down.** Losing even five pounds can lower blood pressure.

▲ **Get moving.** Being active helps control weight and contributes to better circulation. Take quick-paced walks around the neighborhood or mall to be sure you’re getting at least 2 hours and 30 minutes of exercise each week.

▲ **Limit alcohol.** No more than one drink a day for women and two drinks a day for men.

▲ **Don’t smoke.** If you do, consider quitting.

▲ **Manage stress.** Learn muscle relaxation and deep-breathing skills, and get plenty of sleep.

Remember to “team up, pressure down.”

Through medication, healthy life changes, and working closely with your health care team, you can get—and keep—your blood pressure under control. That’s a message to take to heart.
Glossary

Here are some commonly used terms that relate to high blood pressure and/or your medication.

Atherosclerosis: The hardening and narrowing of the blood vessels where the heart beats or squeezes blood into the vessels. It is the “top number” in a blood pressure reading. For example, if your blood pressure is 140 over 90, the diastolic measurement is 90. 

Cardiovascular disease: Refers to conditions that involve narrowed or blocked blood vessels. It can result in a heart attack, chest pain, or stroke.

Blood pressure: The pressure of blood in the blood vessels when the heart is relaxed between beats. It is the “bottom number” in a blood pressure reading. For example, if your blood pressure is 140 over 90, the diastolic measurement is 90.

Blood pressure monitor: A device used to measure blood pressure. It consists of an arm cuff, dial, pump, and valve.

Diastolic blood pressure: The pressure of blood in the blood vessels when the heart is relaxed between beats.

Systolic blood pressure: The pressure of blood in the blood vessels when the heart beats or squeezes blood into the vessels. It is the “top number” in a blood pressure reading. For example, if your blood pressure is 140 over 90, the systolic measurement is 140.

Stroke: Damage to brain tissue from a cutoff of blood supply in the brain. The lack of blood can be caused by clots that block blood flow, or by bleeding in the brain from a burst blood vessel, or by bleeding in the brain from a burst blood vessel.

Hypertension: High blood pressure.

Heart disease: The broad term that refers to several different types of heart conditions.

Heart attack: Damage to the heart muscle from lack of blood flow for a long time.

Stoke: Damage to brain tissue from a cutoff of blood supply in the brain.

Arteriosclerosis: The hardening and narrowing of the blood vessels.
Team up with a spouse or loved one to help bring your blood pressure down.

You’re working with your doctor and pharmacist to take care of your blood pressure. But there is a key third member to your health care team: your spouse or other loved one. This person can help you with the day to day support needed to help you manage your condition, medications, and lifestyle changes.

So take out this page from your journal and have an honest talk with your team member. You can discuss the kind of support you can give each other.

Learn more how you can help at http://millionhearts.hhs.gov
Team up with the pharmacist.
The pharmacist is also an important member of your loved one's health care team. Talk with the pharmacist—he/she is there to help. Here are some tips on getting started:

▼ Meet the pharmacist. Go with your loved one to the pharmacy when a prescription is ready. Ask to speak to the pharmacist and let him/her know how you are part of your loved one’s health care team.

▼ Bring a list of medications. Write down a list or bring all past and current medications your loved one takes. This includes prescriptions, over-the-counter medications, and vitamins used on a normal basis. Share this list with the pharmacist. Talk with the pharmacist about any possible side effects and to make sure the medications are safe to take with each other.

▼ Ask questions. The pharmacist is an expert on medications and how they work. Refer to page 21 of your loved one’s journal for some questions to ask.

Don’t forget, you, your loved one, the doctor, and the pharmacist are all on the same team. The team that will help get—and keep—your loved one’s blood pressure down.

Learn more how you can help at http://millionhearts.hhs.gov

Million Hearts™
@MillionHeartsUS
## Clinical competency:
Patient self-measured blood pressure (SMBP) at home

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Meets competency (Check if “Yes”)</th>
<th>Needs more training (Check if “Yes”)</th>
<th>Method of validation</th>
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<td>Tell the patient to use the bathroom if they need to prior to measuring their blood pressure (BP)</td>
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<tr>
<td>Tell the patient to rest sitting in a chair for several minutes prior to measuring their blood pressure</td>
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<tr>
<td>Ensure the patient’s device has the correct cuff size (You may need to guide the patient to purchase a different size cuff from the manufacturer)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show the patient how to position the cuff correctly on the arm against bare skin (NOTE: Refer to the manufacturer’s user manual for instruction on placement of the tubing)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teach the patient proper positioning: • Seated in a chair with back supported • Legs should be uncrossed • Feet flat on the ground or supported by a foot stool • Arm supported with the BP cuff in place and positioned so that the BP cuff is at the level of the patient’s heart</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct the patient not to talk, use the phone, text, email or watch television during the procedure. (Also explain that no one else should be talking during blood pressure measurement.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruct the patient to take two readings one minute apart, once in the morning and once in the evening</td>
<td></td>
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</tr>
<tr>
<td>Show the patient how to turn on the device and press the start button</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If an error reading occurs, direct the patient to start over</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When the cuff completes the deflating process and a reading is displayed, explain to the patient which numbers represent the systolic and diastolic blood pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show the patient how to document their blood pressure on the flow sheet or wallet card</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>If the device has memory capability, show the patient how to retrieve the readings</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Provide the patient with instructions on what to do if readings show an abnormal blood pressure measurement</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Comments:  ____________________________________________________________________________________  

Employee’s signature: _______________________________ Date: ______________  

Trainer’s signature: _______________________________ Date: _______________
Appendix B: Monthly Blood Pressure Log

**Monthly Blood Pressure Log**

Month ______________  Patient Name ___________________________________  Date of Birth _____________

*Please remember to take your blood pressure at the same time every day or as directed by your health care provider.*

<table>
<thead>
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<th>Day</th>
<th>Time</th>
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<th>High/Normal</th>
<th>Diastolic</th>
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## Self-Monitoring Blood Pressure Enrollment Form

### Enrollee Information

<table>
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<th>Info</th>
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<tbody>
<tr>
<td>Name of Patient</td>
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<tr>
<td>Date of Birth</td>
<td></td>
</tr>
<tr>
<td>Daytime Contact Number</td>
<td></td>
</tr>
<tr>
<td>Patient Email Address</td>
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</tr>
<tr>
<td>Referring Provider</td>
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<tr>
<td>Clinic</td>
<td></td>
</tr>
<tr>
<td>Patient Medical Record Number</td>
<td></td>
</tr>
</tbody>
</table>

### Self-Monitoring Blood Pressure Program Enrollment Agreement

1. ________________ (clinic name) will supply ________________ (monitor name) blood pressure monitor to each enrolled patient at no financial cost.
2. Patient will be trained on the proper way to obtain a blood pressure at the time of enrollment.
3. Patient agrees to record daily measurement in the AHA Check. Change. Control.® online portal tracker, unless unable, then they will maintain a written blood pressure log supplied by ________________ (clinic name).
4. Patient agrees to contact their provider immediately in the event of an issue with the blood pressure monitor. The health center will evaluate the issue and determine if a replacement monitor should be issued.
5. If after the enrollment, the patient determines they do not wish to participate, they agree to return the monitor to the health center.
6. Patient demonstrating control and compliance with this agreement will be awarded the blood pressure monitor to continue self-monitoring.

**Patient Signature** ____________________________ **Date** ________________

---

**For Office Use Only**

BP Monitor # Issued ___________ Date Issued ___________ Agreement Scanned Date ___________
Appendix D: How to Measure Blood Pressure Accurately at Home

How to measure BLOOD PRESSURE accurately at home

PREPARE

- Do not smoke, exercise, have caffeine, eat a large meal, or take a decongestant within 30 minutes before you measure your blood pressure.
- If you take blood pressure medication, perform blood pressure measurement before you take your medication.
- If you need to, use the bathroom before taking your blood pressure.
- Find a quiet space where you can rest for five minutes and be comfortable without distraction.

POSITION

- Place cuff on bare arm, just above the elbow mid-arm.
- Position arm on a table at heart level.
- Sit with your legs uncrossed and feet flat on the floor.
- Sit in a chair, with back supported against the chair.

MEASURE

- Take two blood pressure measurements, at least one minute apart.
- Stay in a relaxed position between measurements.
- Avoid distractions during measurements, do not talk, watch TV, use phone, computer and other devices.
- Record your blood pressure reading when finished.

SNHD

Southern Nevada Health District

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