



**Quality Improvement
Organizations**

Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

SUPERIOR HEALTH
Quality Alliance

Exploring Best Practices Related to the ABCSs of Heart Health: A Structured Collaborative – Session Two

Jerri Hiniker, BSN, RN, PHN

March 5, 2024

Introductions

- Name
- Title
- Clinic/organization, location
- What was one thing from our first session on Feb. 6 you were able to or tried to put into practice this past month?

Ideas Discussed During the February Session

- Selecting a self-measured blood pressure (SMBP) program champion.
- Begin design your SMBP program.
- Develop a workflow for your SMBP program.
- Identifying patients who are eligible for a SMBP program.
- Review and select possible clinical support methods to use.
- Other

Exploring Best Practices Related to the Aspirin, Blood Pressure, Cholesterol and Smoking (ABCSs) of Heart Health Collaborative Schedule

- March 5: SMBP Part Two
- April 2: Aspirin Use and Cholesterol Management
- May 7: Tobacco Cessation
- June 4: Cardiac Rehab

All sessions: 1 – 2 p.m. ET / Noon – 1 p.m. CT.

Objectives

- Identify clinically validated devices for use in your SMBP program.
- Recognize use of specific Current Procedural Terminology (CPT) codes to ensure the return on investment for SMBP programs.
- Describe and understand device accuracy testing.
- Review appropriate cleaning and disinfection processes for blood pressure (BP) devices.
- Demonstrate training techniques for patients to self-measure.

Clinically Validated Devices, CPT Coding and Accuracy Testing

Clinically Validated Devices

- United States List:
 - [US Blood Pressure Validated Device Listing](#)
- Canadian List:
 - [Hypertension Canada List of Recommended Devices](#)
- UK List:
 - [Stride BP Validated Blood Pressure Monitors](#)

CPT Codes for SMBP: 99473

- 99473: SMBP using a device validated for clinical accuracy; patient education/training and device calibration.
 - Can be submitted once per device.
 - Staff time = \$11.19 for patient education Centers for Medicare & Medicaid Services (CMS).
- Examples of patient education/training and device calibration resources:
 - [Target BP: Training Patients](#), American Heart Association (AHA) and American Medical Association (AMA)
 - [Target BP: SMBP Device Accuracy Test](#), AHA and AMA

CPT Codes for SMBP: 99474

- 99474: SMBP using a device validated for clinical accuracy; separate self-measurements of two readings, one minute apart, twice daily over a 30-day period (minimum of 12 readings), collection of data reported by the patient and/or caregiver to the physician or other qualified health care professional, with report of average systolic blood pressure (SBP) and diastolic blood pressures (DBP) and subsequent communication of a treatment plan to the patient.
 - Can be submitted once monthly per patient if requirements met.
 - Provider = \$15.16 monthly for data review / communicating Tx plan (CMS)

CPT Codes for SMBP: 99474, continued

- Device validated for clinical accuracy must be used.
- Measurement protocol – two BPs one minute apart in a.m. and p.m. for 7 days, (minimum of 12 readings).
- Data collection and reporting require documenting the average SBP and DBP.
- Communication of a treatment plan to patient must be documented.
- 30-day period is minimum allowable for repeat code submission, not a defined measurement period for clinical use.
- Unlike Remote Monitoring CPT codes, there is no digital/electronic requirement for SMBP data return.

Device Accuracy Test – TARGET: BP – Step 1

TARGET: **BP**™ |  American Heart Association |  AMA

Self-measured blood pressure Device accuracy test¹

A patient's self-measured blood pressure (SMBP) monitoring device should be tested before it is used as part of an SMBP program. Also test the device annually or any time blood pressure readings are questionable.

Step 1

Complete the table below.

Care team should take five blood pressure readings using a combination of the patient's SMBP device and the office's method of blood pressure measurement.

Measurement	Device	Systolic blood pressure (SBP)
A	Patient's	
B	Patient's	
C	Office's	
D	Patient's	
E	Office's	

SBP Example
133
132
141
134
139

Device Accuracy Test – TARGET: BP – Steps 2 and 3

Step 2

Part 1: Average measurements B and D

Part 2: Compare average of B and D to measurement C

Part 3: If the *difference* is ...

- **Less than 5 mm Hg**, this device can be used for SMBP
- **Between 6 and 10 mm Hg**, proceed to Step 3
- **Greater than 10 mm Hg**, *replace* the device before proceeding with your SMBP program

Example

Part 1: $(132 + 134) / 2 = 133$

Part 2: $133 - 141 = 8$ (note: if the difference is a negative number, ignore the negative sign)

Part 3: Difference is 8, which is between 6 and 10 mm Hg, so proceed to Step 3

Step 3

Part 1: Average measurements C and E

Part 2: Compare average of C and E to measurement D

Part 3: If the *difference* is ...

- **Less than or equal to 10 mm Hg**, this device can be used for SMBP
- **Greater than 10 mm Hg**, *replace* the device before proceeding with your SMBP program

Example

Part 1: $(141 + 139) / 2 = 140$

Part 2: $140 - 134 = 6$ (note: if the difference is a negative number, ignore the negative sign)

Part 3: Difference is 6, which is less than or equal to 10 mm Hg, so proceed with SMBP program

1. Eguchi et al. A Novel and Simple Protocol for the Validation of Home Blood Pressure Monitors in Clinical Practice. *Blood Press Monit.* 2012;17(5):210-213.
© 2018 American Medical Association. All rights reserved. 18-212812:3/18

Cleaning and Disinfection

Centers for Disease Control and Prevention (CDC) Guidelines for Cleaning Versus Disinfecting

Cleaning:

- Removal of germs, dirt and impurities from surfaces.
- Does not kill germs but removes them.
- Reduces germs and infection transmission risk.

Disinfecting:

- Using disinfectant chemicals to kill surface germs.
 - i.e., United States Environmental Protection Agency (EPA)-registered disinfectants to target specific microorganisms.
- Kills germs but does not remove or clean surface germs.
- Disinfection after cleaning reduces infection transmission risk.

CDC Guidelines for BP Device Disinfection to Prevent SARS-CoV-2 Cross Contamination

Hard (non-porous) Surfaces

- Wear disposable gloves when cleaning/disinfecting surfaces. Wash hands prior to donning gloves and discard gloves after each cleaning.
- Consult the manufacturer's instructions for cleaning and disinfection products used.
- Clean hands immediately after gloves are removed.
- Clean dirty surfaces using a detergent or soap and water prior to disinfection.

Electronics

- For electronics such as cell phones, tablets and remote controls remove visible contamination.
- Follow the manufacturer's instructions for all cleaning and disinfection products.
- Consider use of wipeable covers for all electronics.
- If no manufacturer guidance is available, consider the use of alcohol-based wipes or sprays containing at least 70% alcohol to disinfect touch screens. Dry surfaces thoroughly to avoid pooling of liquids.

Storing Devices for Loaning Program

Green – Clean Bin – Device ready for distribution.

- New devices.
- Devices disinfected with a minimum 96-hour hold.



Yellow – Observation Bin – Device on hold.

- Devices disinfected, to be held for minimum 96-hours.



Red – Intake Bin – Device requiring disinfection.

- Devices returned after patient use.
- Place device in protective bag for source control.
- Person disinfecting is also responsible for cleaning and disinfecting area where monitors are processed.



Training Patients to Self-Measure

SMBP Video



Source: AMA, [SMBP Training Video](#)



Steps for Training Patients to Self-Measure

1. Discuss what SMBP is and its importance.
2. Teach patients how to use the device.
3. Educate the patient on hypertensive emergency.
4. Help the patient prepare to measure BP.
5. Guide the patient to correct position to measure BP.
6. Teach the patient how often to measure BP.
7. Show how to document BP data.
8. Prepare the patient for dealing with errors.
9. Check for patient understanding.
10. Complete a home device accuracy check.

1. Discuss What SMBP Is and Its Importance


- Explain SMBP and importance of BP control.
- Inform patient of the positive benefits of SMBP.
- Share educational SMBP resources.

Examples of Patient Education on Importance of BP Control and Benefits of SMBP

TARGET:BP |  

What is self-measured blood pressure?

Self-measured blood pressure (SMBP) is when you measure your blood pressure outside of the doctor's office or other health care settings.



Why do I need to measure my blood pressure if my blood pressure was already measured at the doctor's office?


SMBP allows you to measure at different times throughout the day and over a longer period of time, helping your doctor get a more complete picture of your blood pressure.

How does SMBP help me with my health?

By using SMBP you and your care team can come up with a treatment plan to better control your blood pressure, which can prevent more serious health problems.

Self-measured blood pressure monitoring

Measuring your blood pressure while not at your doctor's office or another care setting.



EL MONITOREO DE LA PRESIÓN, MEDIDO POR SÍ MISMO

Lo que necesita saber

TARGET:BP

2. Teach the Patient How To Use the Device (Cuff Size)

Ensure the loaner device or patient's personal device has the correct cuff size.

- A good-fitting cuff is essential.
 - Too large → underestimates BP.
 - Too small → overestimates BP.
- Train staff to measure patients' arms to ensure appropriate cuff sizes are used.
 - While the patient is standing, measure from acromion process of scapula to olecranon process at elbow.
 - Note midpoint and measure circumference of arm there.



2. Teach Patients How to Use the Device

- Suggest a validated, automated upper arm BP device (preferably with memory and averaging).
- Do not recommend/use wrist cuffs (unless brachial readings are impossible).
- Finger devices should never be used.
- If a patient is purchasing a device, have him/her bring it into your office for accuracy testing.

2. Teach Patients How to Use the Device (Show and Explain)

Show patients:

- How to position the cuff correctly on their upper arm on bare skin.
 - Refer to manufacturer's user manual for instructions on placement of tubing.
- How to turn the device on and begin measurement.

Explain to patients:

- When the cuff completes the deflating process and a reading is displayed, explain which numbers represent the SBP and DBP and what these mean.

BP Measurement Explanation	
<u>120</u>	Systolic (top number). This number represents the pressure in your blood vessels when your heart beats.
80	Diastolic (bottom number). This number represents the pressure in your vessels when your heart rests between beats.

3. Educate the Patient on Hypertensive Emergency

- What does a patient do with an abnormal BP reading?
- At what point does the patient call 911?

Hypertensive Urgency vs. Hypertensive Emergency

Hypertensive Urgency:

- BP of 180/120 or greater, rechecked with similar results but no symptoms – **call primary care physician (PCP)**.

Hypertensive Emergency:

- BP reading of 180/120 or greater with chest pain, shortness of breath, back pain, numbness/weakness, change in vision or difficulty speaking – **call 911**.

4. Help the Patient Prepare to Measure BP

- Tell the patient to use the bathroom, if needed.
- Have the patient rest and sit in a chair for five minutes before starting.
- Inform the patient not to talk, use the phone, text, email or watch TV during the measurement. Explain no one else should talk either.
- Ask the patient to measure his/her BP prior to taking antihypertensive medication in the morning and evening.
- Remind the patient to wait at least 30 minutes after eating before measuring BP.
- If the patient smokes, ask him/her not to smoke within 30 minutes of measuring BP.

5. Guide the Patient To Correct Position for Taking BP Measurements

How to measure your blood pressure at home TARGET:BP™ | American Heart Association | AMA

Follow these steps for an accurate blood pressure measurement

1. PREPARE

Avoid caffeine, smoking and exercise for 30 minutes before measuring your blood pressure.


Wait at least 30 minutes after a meal.

If you're on blood pressure medication, measure your BP *before* you take your medication.

Empty your bladder beforehand.

Find a quiet space where you can sit comfortably without distraction.

2. POSITION



3. MEASURE

Rest for five minutes while in position before starting.

Take two or three measurements, one minute apart, twice daily for seven days.

Keep your body relaxed and in position during measurements.

Sit quietly with no distractions during measurements—avoid conversations, TV, phones and other devices.

Record your measurements when finished.

Content provided by
AMA | MAPBP™

©2020 American Medical Association. All Rights Reserved.
10/20 MRC15940-68

This Prepare, position, measure handout was adapted with permission of the American Medical Association and The Johns Hopkins University. The original copyrighted content can be found at <https://www.ama-assn.org/ama-jahms-johhops-bp-blood-pressure-measures>.

5. Guide the Patient To Correct Position for Taking BP Measurements, continued

Factors that impact BP:

Patient Factors	Measurement Factors
<ul style="list-style-type: none">• Nervousness, stress, anger, illness, pain, long waiting time.• Demographics: age, sex, race and ethnicity.• Lifestyle: diet, exercise, substance use (smoking, alcohol, etc.)• Recent caffeine, decongestant, OTC medication, or nicotine use.• Talking during measurement.	<ul style="list-style-type: none">• Air in BP cuff before measuring.• Correct BP cuff size.<ul style="list-style-type: none">• Too large → underestimates BP• Too small → overestimates BP• Unevenly wrapped cuff.

6. Teach the Patient How Often to Measure BP

- Two sets of measurements per day:
 - One set in the morning and one in the evening, before taking antihypertensive medications.
 - Each set consists of two measurements performed one minute apart.
- This should be done for seven consecutive days (minimum of three days or 12 readings).

7. Show the Patient How to Document BP Data

- Teach patients what to do if their BP is too high, too low or if they are having associated symptoms
- Work with patients on how they should communicate their results back to the practice after a full week of measurements are complete.
 - Electronically through the portal?
 - Paper form?
 - Phone call to the office?

8. Prepare the Patient for Dealing with Errors or Problems

- If an error reading occurs on the device, show the patient how to start over.
- Provide the patient with instructions on what to do (including a number to call if possible) if readings show abnormal BP.

9. Check That the Patient Understands How to Correctly Measure BP

- Ask the patient to “teach back” what he or she has learned and correct any mistakes.
- Provide a second demonstration if needed.
- Offer printed reminders or tips to help the patient remember what to do at home.

10. Complete At-Home-Device Accuracy Check

- SMBP devices should be tested in the office for accuracy if home readings are suspected to be inaccurate (despite use of a validated device).
- Complete home device accuracy check.
 - If there is <5 mm Hg difference between the two methods when the readings are averaged – the device is safe to use.
- Accuracy checks should be done after purchase and then annually.

Discussion

- What are some common reasons patients mention, regarding why they aren't managing their high BP?
- How do you respond?
- How do you make patients feel supported in managing their high BP?

Pre-SMBP Initiation

Getting a patient to start SMBP:

- It can be difficult understanding your BP readings. We have plenty of resources to help you understand them. When you're monitoring at home, you can use the resources to recognize when you're in a good range.
- I understand it can be frustrating managing your BP along with other chronic conditions. What I'm hearing from you, is you're overwhelmed by all the medications you're currently taking and don't want to add another medication to your routine or budget.

Motivational Interviewing (MI) Tip #1: Empathetic replies. Show you are listening by summarizing what the patient explained to you.

Post-SMBP Initiation

Prior to taking home device for the first time:

- Although it can be scary being diagnosed with hypertension (HTN) at first, unmanaged HTN can create more problems later, so it's important we address it as early as possible so you can spend time with your grandkids for a long time.
- What can we do together to help you feel comfortable monitoring at home?

MI Tip #2: Reply to develop discrepancy and empower the patient.

Post-SMBP Initiation: Next Visit

At next visit, after SMBP initiation:

- What are some challenges you've had with SMBP?
- How can we work together to overcome those challenges?
- What small steps can you make this time around?
- If the patient hasn't monitored: How can I help you create a plan to monitor your BP at home?

MI Tip #3: Use terms that reinforce positive change.

Post-SMBP Initiation: Results

When/if patient calls to provide SMBP results:

- Wow! You measured and recorded your BP for all seven days!
- What strategies did you use to remember to self-measure every day?
- What did you notice about your results?
- Did you experience any physical benefits when self-measuring?

MI Tip #4: Support self-efficacy. Encourage the patient by asking questions that support confidence.

Post-SMBP Initiation: Challenges

Patients who have difficulty keeping up with SMBP:

- Life can be really busy, and it can be easy to forget to measure your BP.
- How can I help you remember to measure your BP in the evenings?
- When are you most likely to sit down and measure your BP?

MI Tip #5: Roll with resistance. Work together to form a solution – see what will work for the patient.

Post-SMBP Initiation: Program Completion

After patient completes SMBP program:

- What were some positive things about measuring your BP at home?
- What other healthy behaviors did you practice?
- What do you want to do next?

MI Tip #6: Leave the door open for more positive change behaviors.

References

- [When and How to Clean and Disinfect a Facility](#), CDC
- [Guideline for Disinfection and Sterilization in Healthcare Facilities \(2008\)](#), CDC
- [Viability of SARS-CoV-2 on surfaces](#), Australian Government Rapid Research Information Forum
- Xu P, Qian H, Miao T, et al. [Transmission routes of Covid-19 virus in the Diamond Princess Cruise ship](#). medRxiv. 2020 Apr. DOI: [10.1101/2020.04.09.20059113](#)
- Aytoğan H, Ayintap E, Özkalay Yılmaz N. Detection of Coronavirus Disease 2019 Viral Material on Environmental Surfaces of an Ophthalmology Examination Room. JAMA Ophthalmol. 2020;138(9):990–993. doi:10.1001/jamaophthalmol.2020.3154: [Detection of Coronavirus Disease 2019 Viral Material on Environmental Surfaces of an Ophthalmology Examination Room](#)
- [Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1](#) NEJM 382;16 nejm.org April 16, 2020, <https://www.nejm.org/doi/full/10.1056/NEJMc2004973>
- [How COVID-19 Spreads](#), CDC

Questions?

Exploring Best Practices Related to the ABCSs of Heart Health Collaborative Schedule

- **April 2:** Aspirin Use and Cholesterol Management
- **May 7:** Tobacco Cessation
- **June 4:** Cardiac Rehab

All sessions: 1 – 2 p.m. ET / Noon – 1 p.m. CT.

Continue the Conversation in

Superior Health Connect



Connect is a shared learning environment for Superior Health participants to come together to foster and promote an all-teach-all-learn climate that provides the framework to improve and sustain mutual health care quality improvement initiatives locally, regionally, and nationally.

<https://bit.ly/3BhfHc1>



Scan to join Connect.



Quality Improvement Organizations

Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

SUPERIOR HEALTH

Quality Alliance

This material was prepared by the Superior Health Quality Alliance, a Quality Innovation Network-Quality Improvement Organization under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS.

12SOW-MI/MN/WI-CC-24-57 030124