

# Managing Hypertension Remotely Using Self-Measured Blood Pressure (SMBP)

## **AMA Team**



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# **Improving Health Outcomes**

## No new preventable cases of type 2 diabetes

Everyone with hypertension has their blood pressure at goal



# "Self-monitoring alone is not associated with lower BP or better control..."

Tucker KL, Sheppard JP, Stevens R, Bosworth HB, Bove A, Bray EP, Earle K, George J, Godwin M, Green BB, et al. Self-monitoring of blood pressure in hypertension: a systematic review and individual patient data meta-analysis. *PLoS Med*. 2017;14:e1002389. doi: 10.1371/journal.pmed.1002389



## **Objectives**

- Outline steps to use Self-Measured Blood Pressure (SMBP) for remote management of hypertension and available resources to support implementation of SMBP
- Review the 2020 CPT codes to support SMBP and the remote management of hypertension
- Discuss recent changes to quality measurements related to remote management of hypertension



## **Defining Self-Measured BP (SMBP)**

Self-measured blood pressure (SMBP) refers to blood pressure (BP) measurements obtained by the patient outside of a clinical setting





## SMBP for remote management of hypertension

## **HOW** SMBP can be used to:

- Confirm a diagnosis of sustained hypertension, white coat hypertension or masked hypertension
- Assess BP control and effectiveness of changes in treatment
- Engage patients in self-management of BP

### **WHEN** SMBP can be used:

- Before or after a scheduled encounter
- After a medication or treatment change
- At clinician discretion

## *WHO* Physicians, other clinical team members, patients







## 7 Steps for SMBP

- 1 Identify patients for SMBP
- 2 Confirm device validation and cuff size
- **3** Train patients
- 4 Have patients perform SMBP
- **5** Average results
- 6 Interpret results
- 7 Document plans and communicate to patients



## **1. Identify patients for SMBP**

- Patients with an existing diagnosis of hypertension
- Patients without a diagnosis of hypertension and
  - recent elevated or high blood pressure measurements in-office
  - suspected high blood pressure measurements out-of-office
  - labile blood pressures or those who need to have BP closely monitored for any reason



## **2. Confirm device validation and cuff size**

- Automated, validated BP measurement devices with upper arm cuffs
  - Wrist devices should only be used if the patient cannot fit into an upper arm cuff or when otherwise medically required
- Appropriately sized cuffs
- Memory storage for 30 or more measurements



## Selecting the appropriate cuff size

• Home BP cuffs usually have a standard-sized cuff that will fit upper arms starting at 8" up to 14-18" (XL options available for some devices)





## **Cuff Demonstration**



## **SMBP** loaner program considerations

- Often used to assist with confirmation of diagnosis
- Specific implementation considerations
  - Determine number of devices to purchase
  - Determine where devices will be stored
  - Determine how devices will be tracked
  - Determine how devices will be prepared between patients



## 3. Train patients

Training patients to properly prepare for and perform SMBP is essential



his Prepare, position, measure handout was adapted with permission of the American Medical Association and The Johns Hopkins University. The original copyrighter content can be found at https://www.ama-assn.org/ama-johns-hopkins-blood-pressure-resources.



## 4. Have patients perform SMBP

- Patients should take two sets of measurements twice a day
  - One set in the morning and one in the evening
  - Each set consists of two measurements performed one minute apart
  - Optimally done for seven days (minimum of 3 days or 12 readings)





2 BP measurements

• Determine when and how patients will share measurements

Muntner P, Shimbo D, Carey RM, et al. Measurement of blood pressure in humans: a scientific statement from the American Heart Association. *Hypertension*. 2019;73:e35–e66. DOI: 10.1161/HYP.00000000000087.



## 5. Average results and 6. Interpret results

- Average all SMBP measurements received from patients
- Document average systolic and average diastolic blood pressure in medical record
  - Will be used for clinical decision making
- Based on results, providers make diagnosis and/or assess control
  - Initiate, intensify or continue treatment as indicated



## 7. Document plans and communicate to patients

- Once treatment and follow-up plan is developed and documented by provider, communicate back to patient
- Confirm patient understanding and agreement





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7-step

# SMBP quick guide www.ama-assn.org/smbp-guide

### 7 steps for SMBP

#### Identify patients for SMBP

- Patients with an existing diagnosis of hypertension
- · Patients with high blood pressure without a diagnosis of hypertension
- · Patients suspected of having hypertension (labile or masked hypertension)

#### Confirm device validation and cuff size

- · Make sure patients have automated, validated devices with appropriately sized upper arm cuffs
- Tools: Use the US Blood Pressure Validated Device Listing" and Self-measured blood pressure cuff selection

#### **Train patients**

- Educate patients on how to perform SMBP using an evidence-based measurement protocol
- Education should include proper preparation and positioning before taking measurements, as well as resting one minute between measurements
- · Verify patients' understanding and share educational resources
- Use the SMBP training video (see also: Spanish version) and the SMBP infographic (see also: Spanish version)

#### Have patients perform SMBP

- Conduct SMBP monitoring whenever BP assessment is desired (e.g., to confirm a diagnosis, to assess every 2-4 weeks if BP is uncontrolled or at physician discretion)
- . Provide instructions on the duration of monitoring and the number of measurements to take each day
- 7 days of monitoring recommended; 3 days (i.e., 12 readings) minimum
- Measurements should be taken twice daily (moming and evening) with at least two measurements taken each time
- Determine when and how patients will share results back to care team
- Examples Include phone, portal or secure messaging
- OF Tool: Use the SMBP recording log

#### Average results

- Average all SMBP measurements received from patients for monitoring period
- · Document average systolic and average diastolic blood pressure in medical record
- · Use the average systolic and average diastolic blood pressure for clinical decision making
- 3 days of measurements (i.e., 12 readings) are recommended as a minimum for clinical decision-making
- OF Tool: Use the SMEP averaging tool

#### Interpret results

- Make diagnosis and/or assess control
- · Initiate, Intensify or continue treatment as needed
- OF Tool: Use the SMBP Interpretation tables

#### Document plans and communicate to patients

- Document treatment and follow-up plans and communicate to patients
- Confirm patients' agreement and understanding

#### CPT\* codes for SMBP are available

and can be submitted for services related to patient training on SMBP, interpretation of SMBP measurements and management based on results.



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# **US Validated Device Listing**

## **Importance of device validation**

2019 AHA"Healthcare providers should adviseScientifictheir patients to use only upper-armStatement oncuff oscillometric devices that haveMeasurementsuccessfully passed validationof BP inprotocols."HumansHumans

Muntner P, Shimbo D, Carey RM, et al. Measurement of blood pressure in humans: a scientific statement from the American Heart Association. *Hypertension*. 2019;73:e35–e66. DOI: 10.1161/HYP.0000000000000087.



## **Device validation**

- US Validated Device Listing launched in April 2020
  - Will be updated as manufacturers submit additional devices for review



### www.ValidateBP.org

- International validated device listings also available
  - Stride BP: <u>https://stridebp.org/bp-monitors</u>
  - Hypertension Canada: <u>https://hypertension.ca/bpdevices</u>
  - British and Irish Hypertension Society: https://bihsoc.org/bp-monitors/





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# **CPT<sup>®</sup> Codes**

## **CPT<sup>®</sup> Code Descriptions**

- 99473: SMBP using a device validated for clinical accuracy; patient education/training and device calibration
- 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 and diastolic pressures and subsequent communication of a treatment plan to the patient



## **2020 CPT<sup>®</sup> codes for SMBP - 99473**

SMBP using a device validated for clinical accuracy; patient education/training and device calibration

- Can be submitted once per device
- Must use device validated for clinical accuracy
- Often used prior to initiating SMBP with patients receiving training for the first time



## 2020 CPT codes for SMBP- 99474

SMBP using a device validated for clinical accuracy; separate selfmeasurements 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 and diastolic pressures and subsequent communication of a treatment plan to the patient

- Can be submitted once monthly per patient if requirements met
- Must use device validated for clinical accuracy
- Minimum of 12 readings
- Data reporting can be done in any manner and by patient/caregiver
- Document average systolic and average diastolic blood pressure
- · Communication of treatment plan to the patient required



HYPERTENSION

#### The 7-step self-measured blood pressure (SMBP) quick guide

An evidence-based resource to help physicians and care teams start using SMBP, including links to practical implementation tools.

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Self-measured blood pressure (SMBP) refers to blood pressure (BP) measurements obtained outside of a physicalra's practice, usually at home. When combined with clinical support (e.g., one-on-one counseling, web-based or telephonic support tools, education), SMBP can enhance the quality and accessibility of care for people with high blood pressure and improve blood pressure control.<sup>1</sup> SMBP can be used to assess BP control and to make a diagnosis of hypertension. SMBP allows patients to actively participate in the management of their BP and has been shown to improve adherence to antiWhypertensive medications.<sup>3</sup>

#### SMBP codes and descriptions

As of January 1, 2020, physicians can submit claims for SMBP services using Current Procedural Terminology (CPT\*) codes 99473 and 99474.

CPT code	Description
99473	SMBP using a device validated for clinical accuracy; patient education/training and device calibration
99474	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 and diastolic pressures and subsequent communication of a treatment plan to the patient

The codes address both initial and ongoing SMBP clinical services:

CPT code 99473 can be used when a patient receives education and training (facilitated by clinical staff) on the set-up and use of a SMBP measurement device validated for clinical accuracy, including device calibration.

9943 can only be reported once per device. It would most commonly be used prior to initiating SMBP in patients suspected of having hypertension or for those patients with an existing diagnosis of hypertension who have a new BP measurement device or are receiving training for the first time.

CPT code 99474 can be used for SMBP data collection and interpretation when patients use a BP measurement device validated for clinical accuracy to measure their BP twice daily (two measurements, one minute apart in the morning and evening), with a minimum of 12 readings required each billing period.

The SMBP measurements must be communicated back to the practice and can be manually recorded (e.g. phone, fax

### www.ama-assn.org/smbp-guide



Updated May 4, 2020

Action	Patient evaluated via E/M Telehealth 12	OR Telephone visit	Patient education & calibration of BP device		Subsequent Activity: Collect and interpret monthly BP readings (no additional E/M service associated)		
Who is performing	Physician / QHP		Physician/QHP		Physician/QHP		
Applicable CPT Code(s)	E/M Telehealth 123	Telephone Visit New and Established Patients	9973 Self-measured blood pressure using a device validate for clinical accuracy patient education/training and device calibration		98/47 6 46f measured blood pressure using a device validated for clinical accoracy pearsarts eif-measurements of two readings one mixute apart, twice daily over a 30-day period (minimum of 1 reading), closetion of data reported by the patient and/or caregiver to the physician or other qualified health care professional, with report of average spatiol and diasolic pressures and subsequent communication of a treatment pan to the patient.		
	New Patient (CPT times)	Add 25 martifican					
	99201 (typical time 10 min)       99202 (typical time 20 min)       99203 (typical time 30 min)       99204 (typical time 45 min)       99205 (typical time 60 min)	99441 (5-10 min) Payor guidelines may vary 99442 (11-20 min) Payor guidelines may vary					
	Established Patient (CPT times)						
	99212 (typical time 10 min) 99213 (typical time 15 min) Add 25 99214 (typical time 25 min) modifier 99215 (typical time 40 min)	99443 (21-30 min) Payor guidelines may vary					
Applicable ICD-10 CM codes	Non-COPD 19 patient: Code applicable ICD-10-CM diagnoses COVID-19 patient: Code applicable ICD-10-CM diagnoses, and applicable COVID-19 focused diagnosis Asymptomatic, no known seposure, results uninonno or negative 211.59 Contact with COVID-19, Suppeted exposure 220.828 U071, COVID-19 [[f]circler and 1, 2002: ICD-Knowncement]						
Place of Service (POS)	11 Physician Office 19 Off Campus Outpatient Hospital 20 Urgent Care Facility 22 On Campus Outpatient Hospital	11 Physician Office		11 Physician Office			
Notes	CMS requires use of modifier 95 for teleheal individual states (through Executive Order) o CMS will permit reporting of telehealth E/M Office for Civil Rights at HHS provides flexibility o	lio-only encounters. Ir Medical Decision Making (MDM)		Do not report 99474 more than once per calendar month			



# Quality Measure Updates (UDS/CMS, HEDIS)

## **HRSA Uniform Data System Updates for 2020**



### **PROGRAM ASSISTANCE LETTER**

DOCUMENT NUMBER: 2020-04

DATE: February 12, 2020

DOCUMENT TITLE: Uniform Data System Changes for Calendar Year 2020

TO: Health Centers Primary Care Associations Primary Care Offices National Cooperative Agreements

#### II. APPROVED CHANGES FOR CY 2020 UDS REPORTING

A. UPDATE QUALITY OF CARE MEASURES TO ALIGN WITH E-CQMS: TABLES 6B AND 7



10. Controlling High Blood Pressure has been revised to align with CMS165v8.



## CMS eCQM 165 version 8.5 Controlling High Blood Pressure: Guidance

In reference to the numerator element, only blood pressure readings performed by a clinician or a remote monitoring device are acceptable for numerator compliance with this measure.

Do not include BP readings:

-Taken during an acute inpatient stay or an ED visit

-Taken on the same day as a diagnostic test or diagnostic or therapeutic procedure that requires a change in diet or change in medication on or one day before the day of the test or procedure, with the exception of fasting blood tests. -Reported by or taken by the member

If no blood pressure is recorded during the measurement period, the patient's blood pressure is assumed "not controlled."

If there are multiple blood pressure readings on the same day, use the lowest systolic and the lowest diastolic reading as the most recent blood pressure reading.



## What do these changes mean?

- BP readings taken using a remote monitoring device may be included
- BP readings from a remote device should be digitally stored and transmitted

Additionally,

 Numerator compliance is defined as the most recent BP being <140/90 mmHg</li>



## **HEDIS**

As of July 1<sup>st</sup>, 2020, the following HEDIS revisions have been made:

- Telephone visits, e-visits and virtual check-ins have been added as appropriate settings for BP readings
- The requirements for remote monitoring devices have been removed and BP readings taken by any digital device are now allowed
- BP readings reported or taken by the member are no longer excluded
- All readings, regardless of practitioner type or setting, may be considered when identifying the most recent BP reading



## What do these changes mean?

- BP readings taken by any clinical team member or the patient may be considered for inclusion in the numerator
- BP readings taken by patients and shared with clinical team members in any way can be considered for inclusion in the numerator



## **Final thoughts**

"Self-monitoring alone is not associated with lower BP or better control, but in conjunction with co-interventions (including systematic medication titration by doctors, pharmacists, or patients; education; or lifestyle counselling) leads to clinically significant BP reduction which persists for at least 12 months. The implementation of self-monitoring in hypertension should be accompanied by such co-interventions".

> Tucker KL, Sheppard JP, Stevens R, Bosworth HB, Bove A, Bray EP, Earle K, George J, Godwin M, Green BB, et al. Self-monitoring of blood pressure in hypertension: a systematic review and individual patient data meta-analysis. *PLoS Med.* 2017;14:e1002389. doi: 10.1371/journal.pmed.1002389





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