

ACCELERATING USE OF SELF-MEASURED BLOOD PRESSURE MONITORING (SMBP) THROUGH CLINICAL-COMMUNITY CARE MODELS

MARGARET MEADOR | MPH, C-PHI | Director, Clinical Integration & Education
 CHANAYE JACKSON | MPH | Clinical Data Manager



★ AIM

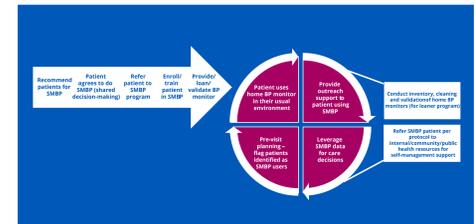
- The primary aim was to increase use of self-measured blood pressure monitoring (SMBP) among health center adults with hypertension using clinical-community collaborative care models.
- A secondary aim was to learn how the actions of clinical providers, community organizations, and public health could best be coordinated/aligned to facilitate broader uptake of SMBP in primary care.

📄 BACKGROUND

- Self-measured blood pressure monitoring (SMBP), the regular measurement of blood pressure by a patient outside the clinical setting, plus additional support, is a proven, cost-effective, and recommended strategy to improve hypertension outcomes¹; however, it has not been widely adopted in the United States. To accelerate use of SMBP, the Centers for Disease Control and Prevention (CDC) funded the National Association of Community Health Centers (NACHC), the YMCA-USA, and the Association of State and Territorial Health Officials to develop and pilot cross-sector care models to offer SMBP to hypertension patients.

1. Whelton PK, Carey RM, Aronow WS, Casey DE Jr, Collins KJ, Dennison Himmelfarb C, DePalma SM, Gidding S, Jamerson KA, Jones DW, MacLaughlin EJ, Muntner P, Ovbigele B, Smith SC Jr, Spencer CC, Stafford RS, Taler SJ, Thomas RJ, Williams KA Sr, Williamson JD, Wright JT Jr. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Hypertension. 2017; e-published ahead of print. <http://hyper.ahajournals.org/content/early/2017/11/10/HYP.000000000000065>

FIGURE 1: KEY INDIVIDUAL PATIENT SUPPORT ACTIVITIES



- These collaborative SMBP models could also reveal ways health care delivery organizations may partner with community organizations and public health agencies to expand their available resources, both to mitigate capacity barriers and increase supports to patients using SMBP, such as providing healthy lifestyle education programs.

🔧 PROJECT DESIGN/STRATEGY

FIGURE 2: PLANNING FOR SMBP: SCOPE, STAFF & OTHER KEY CONSIDERATIONS

COMMUNITY LINKAGES

What role could community partners play to support or optimize the efficiency/capacity of your SMBP efforts?

- Supply funds to purchase home BP monitors?
- Provide SMBP trainers?
- Conduct outreach calls?
- Supply SMBP support programs?
- Supply lifestyle management educators/programs?
- Coordinate or supply transportation resources?
- Coordinate or supply food security resources?

From January 2017 to June 2018, nine health centers in Kentucky, Missouri, and New York, with the support of their health center-controlled networks, designed, tested, and implemented collaborative care models that adapted existing primary care promising practices around SMBP while leveraging unique capacities and resources available through community organizations and public health partners to support their SMBP efforts.

Key implementation activities included:

- A learning community with monthly sharing opportunities from experts and peers
- Localized quality improvement coaching to health centers
- Partnering with community and public health organizations
- Determining SMBP tasks that can be accomplished by a non-licensed person
- Establishing clinical-community collaboration and support mechanisms
- Developing SMBP protocols and policies
- Using quality improvement methods, including workflow and information flow analysis, Plan-Do-Study-Act cycles, and run charts to design, test, refine, and implement collaborative SMBP models

FIGURE 3: EMERGING COLLABORATIVE SMBP MODELS TABLE

EMERGING COLLABORATIVE SMBP MODELS		
MUST BE DONE BY A LICENSED CLINICIAN	CAN BE DONE BY A NON-LICENSED PERSON (E.g., medical assistant, local public health department, community health organization, community health workers)	MUST BE DONE BY PATIENT
<ol style="list-style-type: none"> 1. Diagnose hypertension 2. Prescribe medication(s) 3. Provide SMBP measurement protocol 4. Interpret patient-generated SMBP readings 5. Provide medication titration advice 6. Provide lifestyle medication recommendations 	<ol style="list-style-type: none"> 1. Provide guidance on home blood pressure (BP) monitor selection 2. If needed, provide home BP monitor (free or loaned) 3. Provide training on using a home BP monitor 4. Validate home BP monitor against a more robust machine 5. Provide training on capturing and relaying home BP values to care team (e.g., via device memory, patient portal, app, log) 6. Reinforce clinician-directed SMBP measurement protocol 7. Provide outreach support to patients using SMBP 8. Share medication adherence strategies 9. Provide lifestyle modification education 	<ol style="list-style-type: none"> 1. Take SMBP measurements 2. Take medications as prescribed 3. Make recommended lifestyle modifications 4. Convey SMBP measurements to care team 5. Convey side effects to care team
OPTIONAL TASKS- CAN BE DONE BY A NON-LICENSED PERSON <ol style="list-style-type: none"> 1. Reinforce training on using a home BP monitor 2. Reinforce training on capturing and relaying home BP values to care team (e.g., via device memory, patient portal, app, log) 3. Reinforce knowledge of behaviors that can trigger high blood pressure 		

✔ LESSONS LEARNED

- SMBP is a powerful tool for patient engagement and lifestyle modification, with benefits extending beyond hypertension control
- SMBP is a departure from the outdated practice of office blood pressure reading as the gold standard; this paradigm shift requires change management
- Clinician buy-in is essential; one key component is for them to understand how the investment in SMBP will help their hypertension patients get to control faster and become more engaged in their care
- A clear SMBP protocol based on organizational goals and capacity is fundamental – but don't let perfect be the enemy of good in getting started
- Community partnerships are investments that take time, dedicated staff at both organizations, and clear communication
- SMBP training, SMBP outreach assistance/reinforcement, healthy lifestyle support, and securing home blood pressure monitors are great activities for which to leverage community and public health resources
- National efforts are needed to: 1) facilitate use of patient-generated data, including technology that integrates SMBP measurements into EHRs/HIT systems and measures that accept patient data; 2) improve reimbursement for home blood pressure monitors and SMBP care team activities (training patients, SMBP data management); and 3) increase uptake by the clinical community and demand from patients

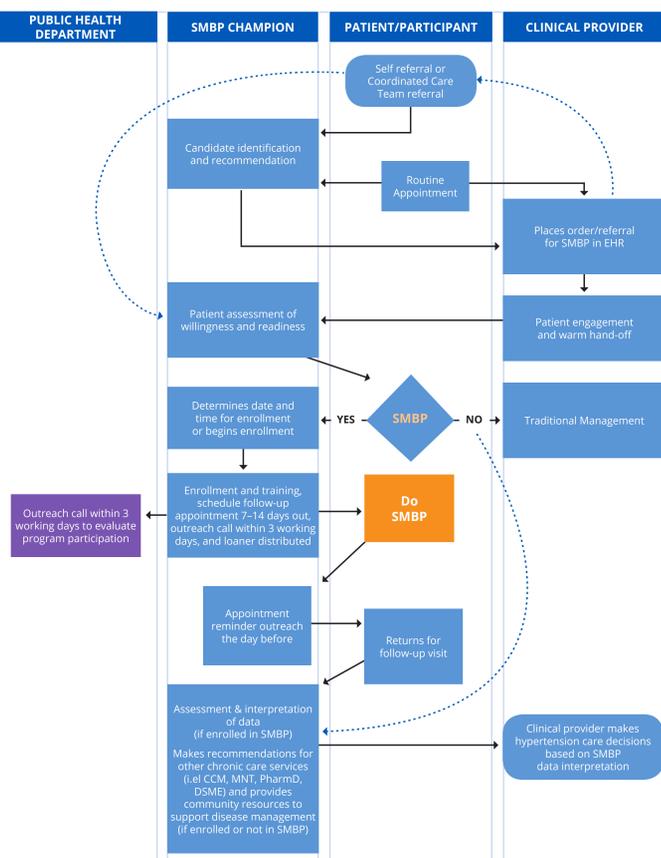


FIGURE 4: SMBP WORK FLOW EXAMPLE

LEGEND

- Occurs within the health center
- Occurs within the public health department
- Occurs outside of the health center

📊 SUMMARY OF RESULTS

- **1,421** patients with hypertension received recommendations for SMBP
- Of those, **795** successfully completed at least one cycle of SMBP (**2** blood pressure readings AM and PM for at least **3** consecutive days)
- **308** patients were referred to a community program to support patients' SMBP efforts and other healthy lifestyle changes

📄 PRODUCTS

NACHC *SMBP Implementation Guide for Health Care Delivery Organizations*



Provides guidance for health care delivery organizations (and others) on:

- Implementing SMBP into practice or optimizing existing SMBP processes in a systematic way
- Change ideas, implementation tips, and tools and resources to set up SMBP successfully based on local goals, environment, and community partners/assets

Go to: <https://www.nachc.org/wp-content/uploads/2018/09/NACHC-Health-Care-Delivery-SMBP-Implementation-Guide-08222018.pdf>

FIGURE 5: SMBP IMPLEMENTATION GUIDE COVER

NACHC SMBP Videos:

- How to Use Your Home BP Monitor (English and Spanish Versions); and
- Self-measurement: How Patients and Care Teams are Bringing Blood Pressure to Control



FIGURE 6: HOW TO USE YOUR HOME BP MONITOR VIDEO STILL FRAME

Go to: <https://millionhearts.hhs.gov/tools-protocols/smbp.html> AND <http://www.nachc.org/taking-control-of-my-blood-pressure-patient-stories/>

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