



Improving Patient Outcomes with Self-Measured Blood Pressure Monitoring (SMBP)

January 28, 2022



The healthcare improvement experts.

Housekeeping Notes

- All attendee lines are muted
- Please submit your questions to our panelists via the Q&A feature
- Questions will be addressed at the end of the session, as time permits



Welcome: Presenter Panel



Amy Porter, BS, LPN
Practice Transformation
Specialist
Quality Insights



Audrey Costello, RN, BSN
Care Management Supervisor
NEPA Community Health Care



Kristen Follert, MS
Chief Operating and
Compliance Officer
NEPA Community Health Care



Continuing Education Credits

- To complete the course, the learner must:
 - Complete the 60-minute webinar
 - Complete the evaluation and post-test
- Continuing Education
 - **Nursing:** This course is approved for 1.0 hours of Continuing Education for Nursing. Quality Insights accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.
 - **Physicians:** The CAMC Health Education and Research Institute designates this internet enduring material activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)[™]. Physicians should only claim credit commensurate with the extent of their participation in the activity.



Learning Objectives

After this course, the learner will:


- Describe prevalence of hypertension and uncontrolled hypertension
- Identify strategies to achieve hypertension control according to the 2020 Surgeon General's Call to Action to Control Hypertension
- Plan workflow modifications to implement self-measured blood pressure monitoring, including use of the patient portal for increased engagement



Quality Insights

- Pennsylvania Department of Health
Improving the Health of Americans
Through Prevention and Management
of Diabetes, Heart Disease, and Stroke
Program
- Serving more than 80 PA healthcare practices
- Provide direct assistance and support for providers at no cost
- Learn more by visiting:
<http://improve.qualityinsights.org/Projects/PA-DOH.aspx>



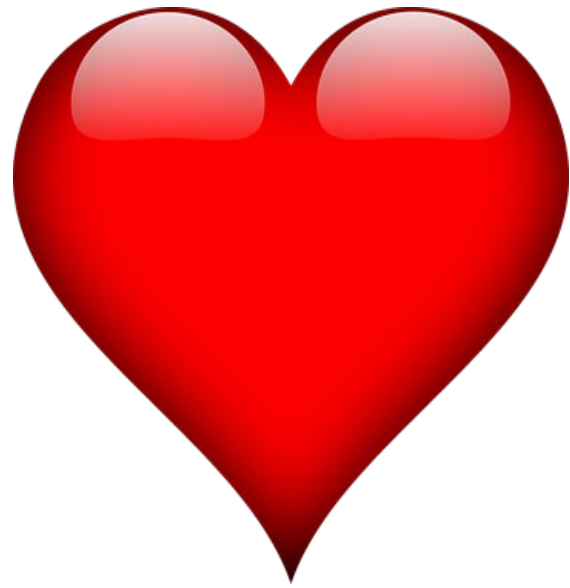


Polling Question #1

What proportion of Pennsylvania adults have been told that they have hypertension?

- A. One in two
- B. Two of three
- C. One in three

Hypertension by the Numbers



- 86 million Americans – about 1 in 3
- **33.3%** of PA adults reported being told they have high blood pressure

Hypertension Demographics - PA

Subpopulations: High Blood Pressure, Pennsylvania, United States

GENDER

High Blood Pressure - Female



High Blood Pressure - Male



Percentage of adults

Both men and women affected

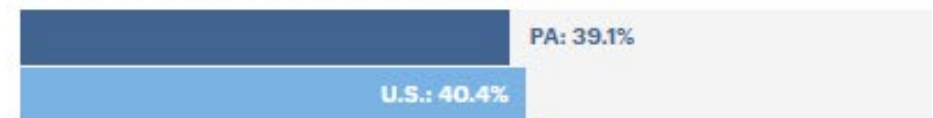
Over 60% of Pennsylvanians 65+

AGE

High Blood Pressure - Ages 18-44



High Blood Pressure - Ages 45-64



High Blood Pressure - Ages 65+



Percentage of adults

Source: [America's Health Rankings](#)

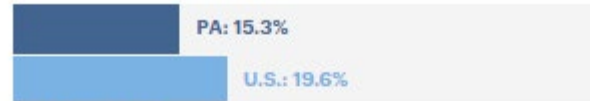


Disparities in Hypertension

PA adults who are Black disproportionately affected

RACE/ETHNICITY

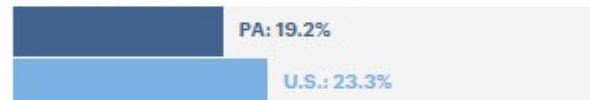
High Blood Pressure - Asian



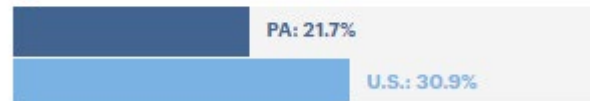
High Blood Pressure - Black



High Blood Pressure - Hispanic



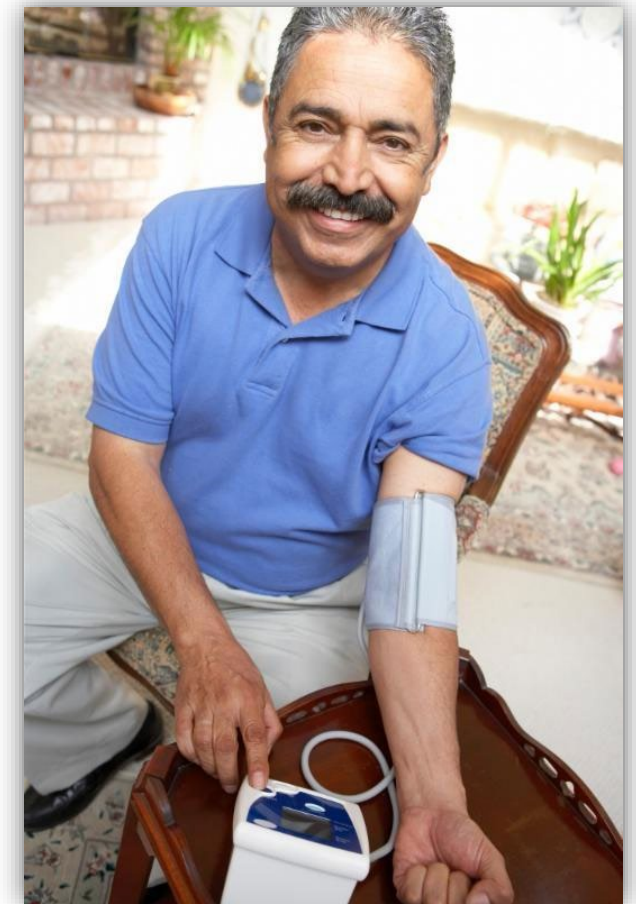
High Blood Pressure - Multiracial



High Blood Pressure - White



Percentage of adults

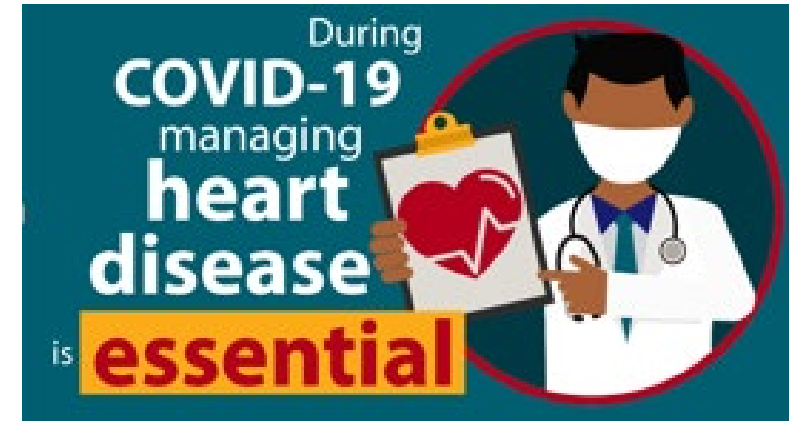
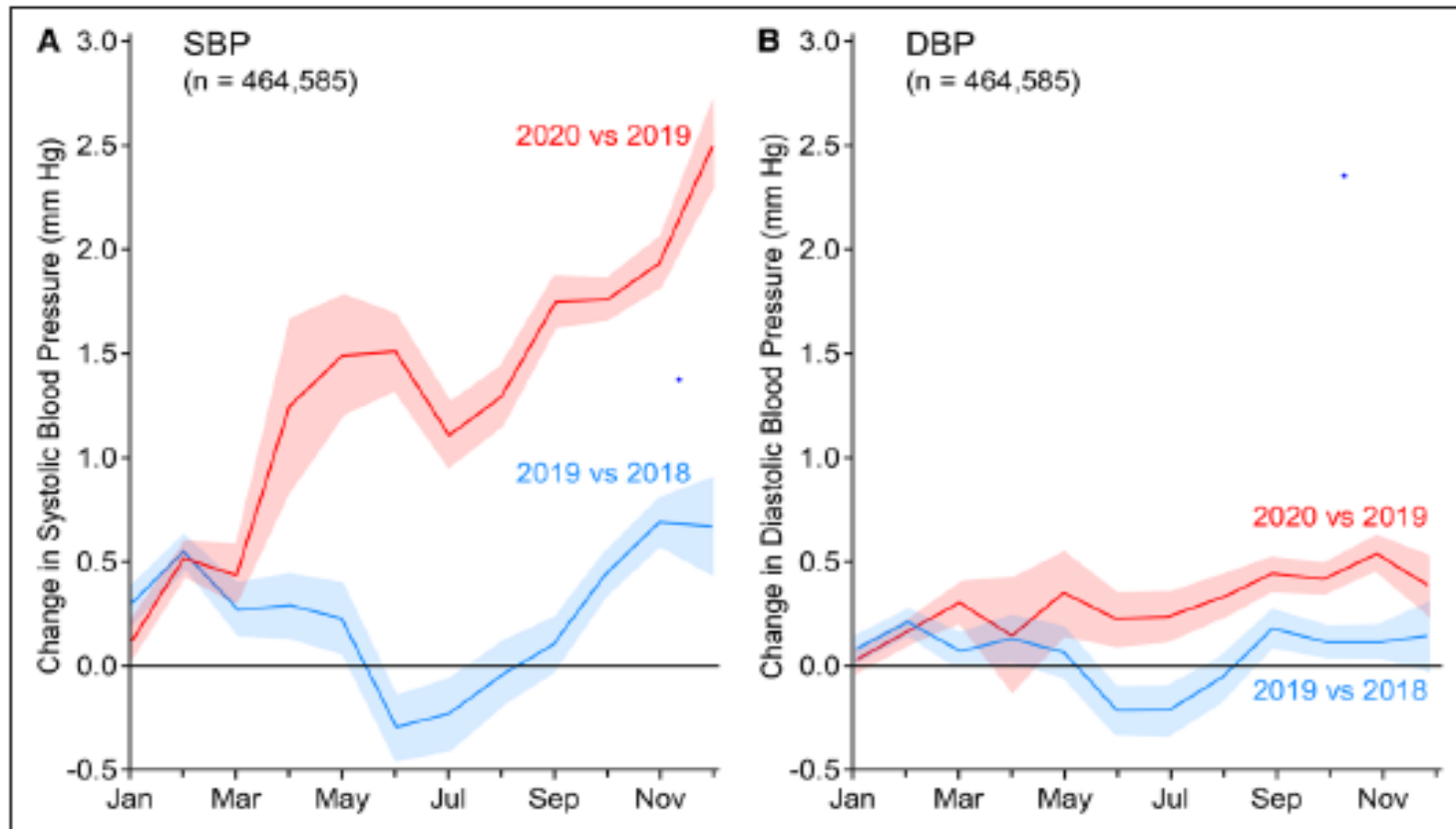


Source: [America's Health Rankings](#)



Hypertension and COVID-19

Blood Pressure Changes During the COVID-19 Pandemic



Source: Laffert et al. [Circulation](#),
[12/05/2021](#)



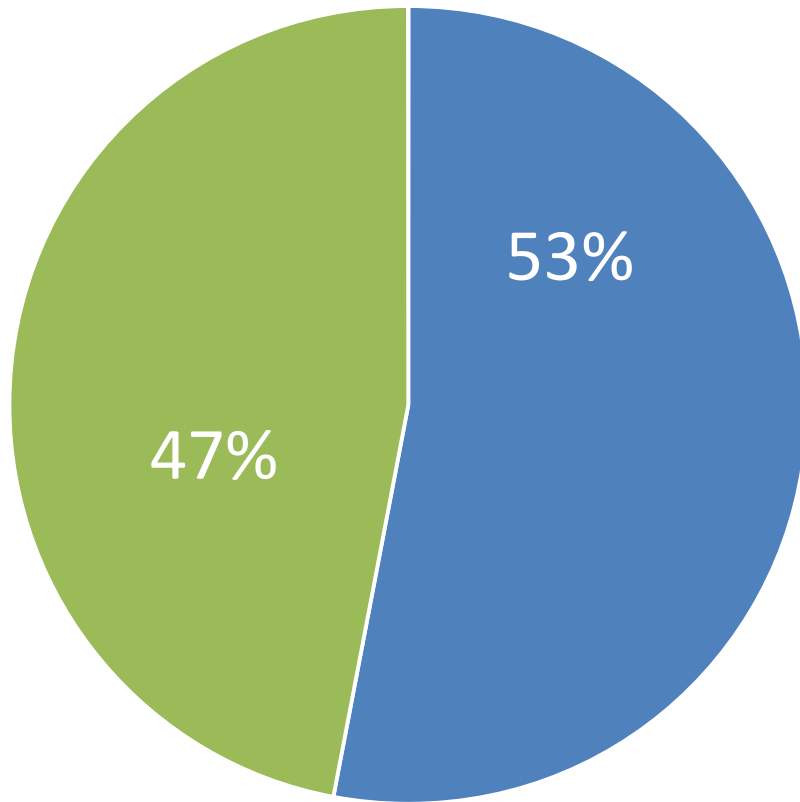


Polling Question #2

Among Americans diagnosed with hypertension, how many are considered controlled (<140/90)?

- A. 95%
- B. 75%
- C. 50%
- D. 25%



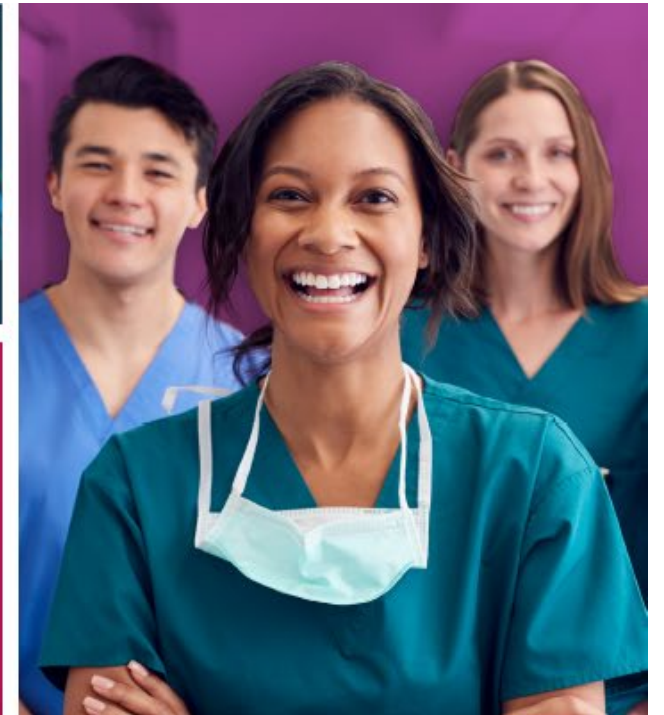
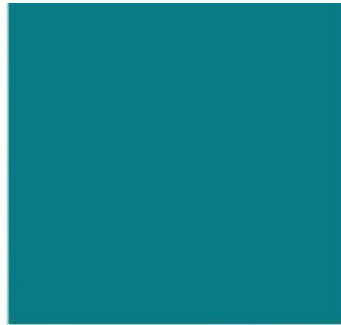


ONLY ABOUT HALF
of people with high blood
pressure have their
condition under control

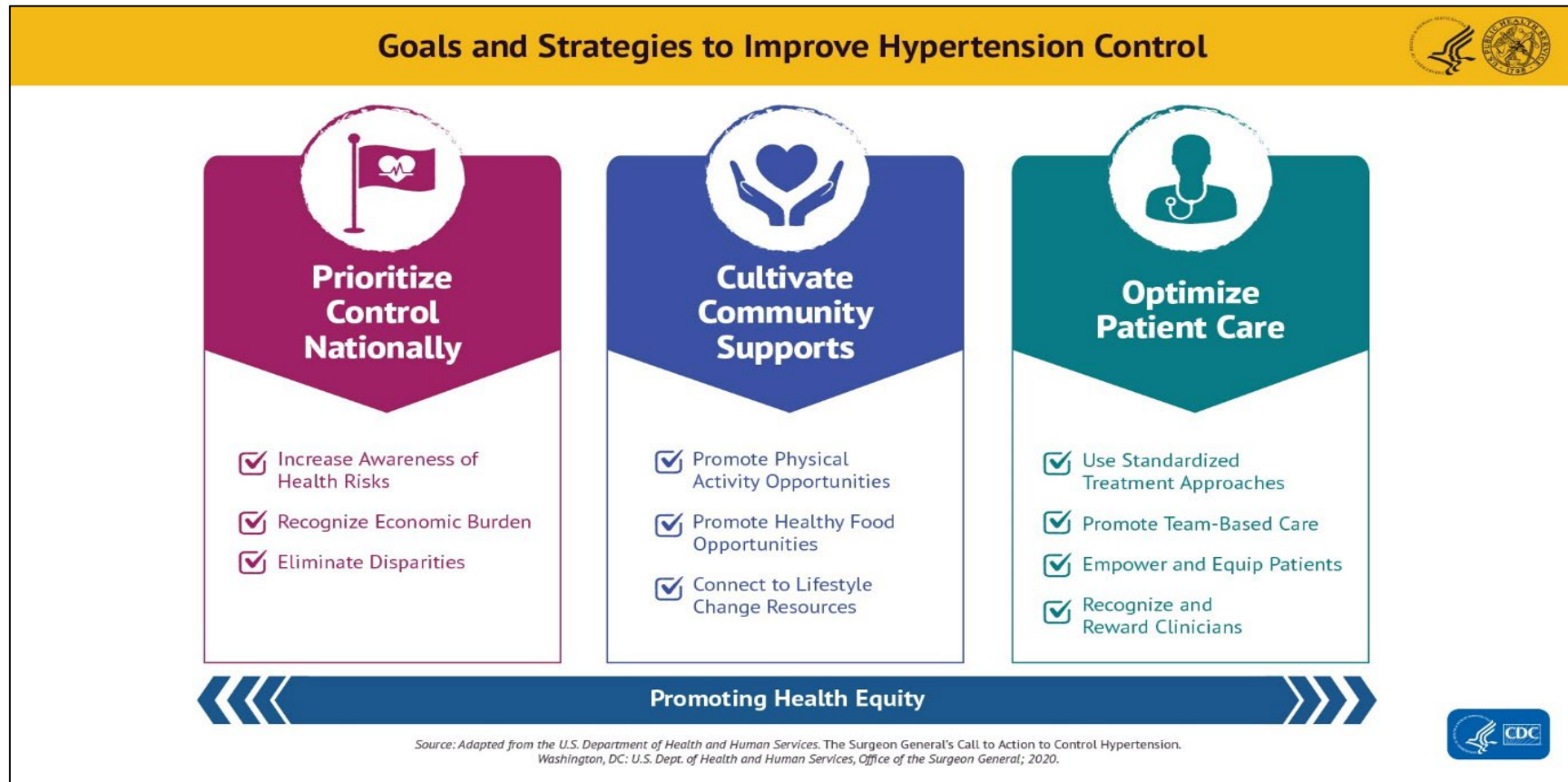
Source: Centers for Disease Control and Prevention



The Surgeon General's Call to Action to Control Hypertension



Surgeon General's Call to Action



Source: [The Surgeon General's Call to Action to Control Hypertension \(Call to Action\)](#)





Million Hearts[®] CDC

Self-Measured Blood Pressure Monitoring

ACTION STEPS for Clinicians

A MILLION HEARTS[®] ACTION GUIDE

Advancing Excellence in Health Care



Domain 3: Health Care System Interventions
Self-Measured Blood Pressure

Self-Measured Blood Pressure Monitoring With Clinical Support

Self-measured blood pressure monitoring (SMBP) involves a patient's regular use of personal blood pressure monitoring devices to assess and record blood pressure across different points in time outside of a clinical or community or public setting, typically at home.^{1,2} 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.³

Summary	Evidence of Effectiveness
<p>SMBP with clinical support involves training patients to regularly monitor and record their own blood pressure at home with a personal device and rely on clinical support as needed. SMBP is a cost-effective strategy for lowering blood pressure and increasing medication adherence.</p> <p>Stories From the Field: Millgrove Medical Center (Norrstown, Pennsylvania).</p>	<p>Effect Implementation Guidance Research Design </p> <p>Internal Validity Independent Replication External & Ecological Validity </p> <p>Legend: Well supported/Supported Promising/Emerging Unsupported/Harmful </p>
	<p>Evidence of Impact</p> <p>Health Impact Health Disparity Impact Economic Impact </p> <p>Legend: Supported Moderate Insufficient </p>

Best Practices for Cardiovascular Disease Prevention Programs 28



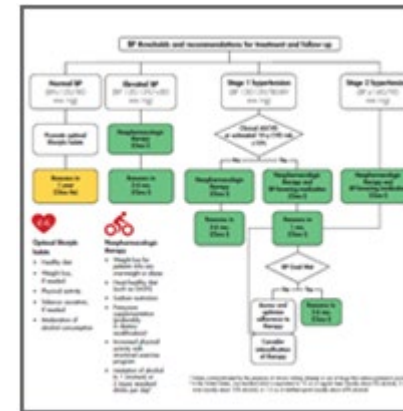
Clinical Support: Key to Sustained Success



- Strong evidence for SMBP when combined with clinical support
- Significant improvements in BP compared to usual care
- Sustained up to 12 months

Resources for Team-Based Care

- Quality Insights' [Care Team Interventions to Implement American Heart Association CVD Primary Prevention Guidelines](#)
- AHA Hypertension Guideline Toolkit
- AHA Blood Pressure Treatment Algorithm
- CDC video: [Help patients take blood pressure medicines as directed](#)




Hypertension Guideline Toolkit

Nearly half of American adults have high blood pressure, but you can make a difference.

The 2017 Guidelines for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults (2017 Hypertension Clinical Practice Guidelines) has important implications for the treatment of nearly 100 million adults in the United States. As healthcare providers, you need resources to help you integrate the new guidelines into your practice so you can provide optimal care for patients with elevated blood pressure (BP) or hypertension.



Blood Pressure Monitor Loaner Program



Now You Can Monitor Your Pressure at Home

The Pennsylvania Department of Health, your healthcare provider, and Quality Insights are providing you with a blood pressure monitor for your home use at **NO COST**.

Included in your package:

- Blood pressure cuff and monitor
- Blood Pressure Measurement Instructions (<https://bit.ly/3n2k4d1>)
- Tip for Taking Your Own Blood Pressure Readings (Your includes log - <https://bit.ly/3V8K4r0>)

Instructions for using your new blood pressure monitor:

- Take your blood pressure (BP) using the included monitor and instructions, as
- BP readings should be recorded on the log located on the back of the "Tip" fly
- BP is to be measured and recorded twice daily (unless otherwise directed by your
- 1. Every Morning: Take two measurements one minute apart, **AND**
- 2. Every Evening: Take two measurements one minute apart

BP measurements should be reported back to your healthcare provider, at direct appointment or secure portal/messaging.

- Please report your readings to your healthcare provider (frequency):
- Notify your healthcare provider immediately of any BP readings over:

Using this free BP monitor will allow you to effectively share your BP measurements with helping them to provide you with the best possible care.

Please contact your healthcare provider if you have any questions.

Partially funded by the Pennsylvania Department of Health through the National Health Interview Survey (NHIS) program. Through Pennsylvania and Department of Health and Mail Order and Blood Bank grant from the Centers for Disease Control and Prevention. Publication number 10/2019-01/000002

Tips for Taking Your Own Blood Pressure Readings

To ensure that your blood pressure measurements at home are accurate, it is important to use the correct technique and tools. Below are some tips you should follow to get the most accurate blood pressure readings at home.

What You Need:

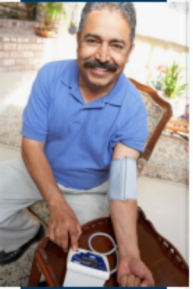
- Use the correct size arm cuff: regular size if your mid upper arm is 13" or less in circumference; large size if greater than 13"
- Use a cuff that has been validated for accuracy (www.validatibp.org) and have it checked every 6-12 months by your provider for continued accuracy

When to Take Your Blood Pressure:

- Before you take your blood pressure medication
- At least 30 minutes after drinking caffeine, alcohol or smoking
- When you do not have a full bladder or bowel
- After sitting quietly for five minutes

How to Take Your Blood Pressure:

- Sit in a chair with your feet flat on the floor, back and arm supported on a flat surface, and your arm at heart level
- Use the same arm each time (the arm with the higher blood pressure if your doctor found a difference)
- Wrap the cuff snugly around your bare upper arm
- The lower edge of the cuff should be one inch above your elbow crease
- The tubing on the cuff that connects to the device should be on the inside of your arm



Quality Insights

Quality Insights is a Pennsylvania Department of Health program. For more information, visit www.qualityinsights.org or call 1-800-692-7373. Quality Insights is a program of the Pennsylvania Department of Health. Publication number 10/2019-01/000002



Panelists – NEPA Community Health Care



Audrey Costello, RN BSN
Care Management Supervisor



Kristen Follert, MS
Chief Operating and Compliance
Officer

NEPA Community Health Center



NEPA Community Health Care

Self-Monitored Blood Pressure Loaner Program

providing exceptional care to all those
who seek it

Overview

- **Who provides this service to our patients?** Sarah G., RN BSN, serves as our Chronic Care Manager and SMBP loaner program point-of-contact.
- **Patient Roster** ranges between 120-130 patients per month. Includes billable and non-billable patients. We provide chronic care management services to all patients whether insurance covers or not. For SMBP, we started with these patients first.
- **Implementation of SMBP** started with Sarah reaching out to her roster of patients diagnosed with pre-hypertension and hypertension to gauge level of understanding of disease process. Sarah then offered kits to eligible patients who were not already monitoring their blood pressure at home. Patients would then come into office for kit education and retrieval. Sarah checks in with patients weekly via phone call then sends blood pressure results to the provider for review.

Successes

- Patient receives weekly phone calls to review blood pressure logs with RN who then forwards results to provider for further review and orders, if needed.
- Patients have more controlled blood pressures with consistency of follow up and reporting measures.
- Patients are provided frequent education on importance of blood pressure monitoring.

Barriers

- Lack of provider and staff buy-in. Clinic staff often forget to refer patients to the SMBP loaner program.
- RN Care Manager unable to be in all three clinics at once. Sometimes relying on clinic LPNs to educate patients.
- Knowledge deficit of patients understanding value of program and agreeing to participate.

Questions



Polling Question #3

What is the adherence rate for most medications for chronic conditions such as diabetes and hypertension?

- A. 80 – 90%
- B. 70 – 80%
- C. 60 – 70%
- D. 50 – 60%



The Unmet Challenge of Med Adherence

25% New prescriptions that are never filled

50-60% Adherence rates for meds for chronic conditions

25% Portion of total hospitalizations that are related to medication nonadherence

\$300 billion Annual cost of medication nonadherence-related hospitalizations

150,000 Estimated deaths per year attributable to med nonadherence



Improving Medication Adherence

Welcome to the **Adherence Estimator**[®]

This survey resource can help you identify patients who may be at risk for medication nonadherence. The Adherence Estimator has been validated for oral medications prescribed for certain chronic, asymptomatic conditions (eg, high cholesterol, diabetes). The Adherence Estimator has not been validated for symptomatic conditions (eg, asthma). For symptomatic conditions, even medications that should be taken continuously may be prescribed or taken on an as-needed basis.

[Proceed to the survey](#)

https://www.ehidc.org/sites/default/files/resources/files/Adherence%20Estimator%20Kit_%20Interactive%20PDF.pdf



Medication Adherence Practice Module

January 2021

*Diabetes Control & Prevention, Hypertension and
Cholesterol Management Project*

 Quality
Insights

Funding provided by the Pennsylvania
Department of Health through the
Improving the Health of Americans
Through Prevention and Management of
Diabetes and Heart Disease and Stroke
federal grant from the Centers for
Disease Control and Prevention.
Publication number PADOH-HD-121422



Resources for Patients



Apps

 **HeartStar BP Monitor** - Designed to allow users to manually or automatically (via Bluetooth with compatible devices) input home blood pressure (BP) readings, this app also creates graphs to help users visualize BP patterns and understand how activity influences readings. Use it to set reminders for when it's time to check your BP and print out your log to share with your physician. Available on iPhone (FREE)

 **Smart Blood Pressure-Guide** - Record, track, analyze, and share your BP information through your iPhone with this app. It can analyze progress using graphs and statistics, plus, users can tag data when lifestyle modifications or medication adjustments are made. Data can be color-coded to easily identify when rates are above goal. (FREE and offers in-app purchases.)

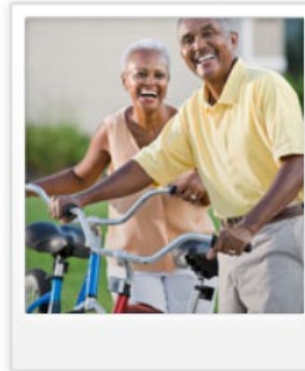
 **Omron Health Heart Advisor** - Learn how your lifestyle impacts your heart health. The app is designed exclusively for the **HeartGuide** wearable BP monitor. The app makes it easy to receive valuable daily insights about your BP and activity. You also get easy access to your dashboard and health history, and can track trends over time with color-coded health graphs, and setup daily reminders. The app facilitates focused dialogue with your doctor and access real-time heart health coaching. Available on Android AND iPhone. (FREE)

* This list is provided for informational purposes only and does not imply endorsement by Quality Insights.

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Here is a sample pledge:



I WILL
grow old with my wife.

Source: <https://www.scriptyourfuture.org/get-medicine-reminder/>




Patient Education Resources

- [DASH Eating Plan](#)
- [AHA's Get the Scoop on Sodium and Salt](#)
- [AHA Life's Simple 7](#)
- [AHA's 5 Steps to Quit Smoking and Vaping](#)
- [Blood Pressure Fact Sheets](#)



Lifestyle Change Resources



Need Help Controlling Your Blood Pressure? Check Out These Centers for Disease Control and Prevention (CDC)-Recognized Resources

1 in 3 One in three American adults have high blood pressure. This is a major risk factor for stroke and heart disease, which are two of the leading causes of death in the U.S. Strong scientific evidence shows that self-measured blood pressure monitoring (SMBP) combined with clinical support and lifestyle changes assist individuals with hypertension lower their elevated blood pressure.

Coverage for home blood pressure monitors varies among the many health insurance carriers in Pennsylvania, but can be confirmed by your insurance company.

The programs below have been approved by the Centers for Disease Control and Prevention (CDC) to assist individuals create long-lasting lifestyle changes by reducing their risk associated with hypertension, and other chronic diseases.

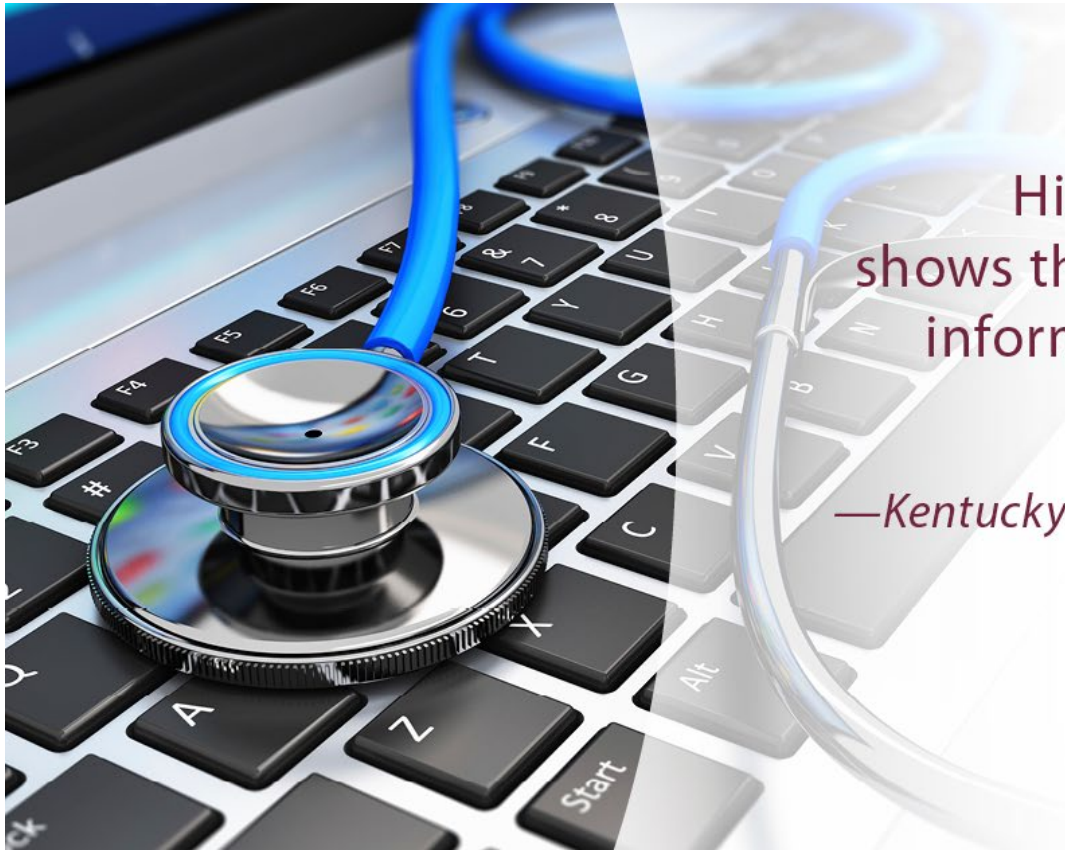
YMCA Self-Monitoring Blood Pressure Program
Benefits of Program: <ul style="list-style-type: none">• Four-month program to help participants manage high blood pressure• Identify and control triggers that raise blood pressure• Coaching on proper blood pressure measurement and tracking• Two consultations a month with a Healthy Heart Ambassador• Monthly Nutrition Education Seminars
Visit http://www.ymca.net/blood-pressure-self-monitoring for the nearest YMCA Blood Pressure Self-Monitoring program.
Weight Watchers (WW®)
Benefits of Program: <ul style="list-style-type: none">• Variety of membership plans (digital, studio/workshop, and coaching)• App and website to track food, physical activity, and weight loss• Certified coaches for support building healthy behaviors and habits• Rewards program, Wellness Wins, to celebrate weight loss milestones
Visit www.weightwatchers.com/us/find-a-meeting to find the nearest WW®.

Quality Insights

- [Taking Off Pounds Sensibly \(TOPS\)](#)
- [Curves Complete](#)
- [Weight Watchers \(WW®\)](#)
- [National Diabetes Prevention Program \(for people with prediabetes\)](#)
- [YMCA's Blood Pressure Self-Monitoring Program](#)
- [EFNEP](#)
- [SNAP-Ed](#)



Leverage Technology to Reach Goals



“Million Hearts®
Hiding in Plain Sight
shows the power of health
information technology
to find care gaps.”
—*Kentucky Health Center Network*



Source: <https://millionhearts.hhs.gov/tools-protocols/tools/health-IT.html>



Patient Portal Optimization

- Secure direct messaging
 - Can include self-measured BPs
- Data access
- Prescription refill requests
- Appointment scheduling



QUALITY INSIGHTS

HOW CAN WE HELP?



Practice Recognition



The certificate features a purple background with a white star containing a heartbeat line. Logos for the CDC and Million Hearts are in the top corners. The text is centered and includes a congratulatory message about COVID-19 performance in 2021. Signatures and titles of Laurence Sperling and Janet Wright are at the bottom.

Hypertension Control
Exemplars

Quality Insights

Congratulations on demonstrating excellence in prioritizing and improving hypertension control during the COVID-19 pandemic.


2021

Laurence S. Sperling
Laurence Sperling, MD, MD,
FACC, FACP, FAHA, FASPC
Executive Director, Million Hearts®
Centers for Disease Control and Prevention
and Centers for Medicare & Medicaid Services

Janet Wright MD MACE
Janet Wright, MD, FACC
Director, Division for Heart Disease and
Stroke Prevention National Center for Chronic
Disease Prevention and Health Promotion
Centers for Disease Control and Prevention



Practice Education



Quality Insights

Screening, Measurement and Self-Management of Blood Pressure

February 2021

Live Healthy: Prevention and Management of Hypertension, Diabetes and Stroke Project

Funding provided by the Pennsylvania Department of Health through the Improving the Health of Americans Through Prevention and Management of Diabetes and Heart Disease and Stroke Series grant from the Centers for Disease Control and Prevention. Publication number PH001140 01/2021

HOME ABOUT US PARTNERS **PROJECTS** CONTACT US

PA HYPERTENSION & DIABETES

AWARD WINNERS

E-NEWSLETTER ARCHIVE

HYPERTENSION CONTROL CHAMPS

PRACTICE MODULES

RESOURCES



Pennsylvania Department of Health

Diabetes Control & Prevention, Hypertension and Cholesterol Management Project

<https://improve.qualityinsights.org/Projects/PA-DOH.aspx>





Take action to make high blood pressure control a national priority.



Learn more at
cdc.gov/hypertensionCTA.



We've 
Got This!



Questions?



Evaluation and Post-Test

- Improving Patient Outcomes with Self-Measured Blood Pressure Monitoring (SMBP) Evaluation and Post-Test:

[https://www.surveymonkey.com/r/
FCFBTRZ](https://www.surveymonkey.com/r/FCFBTRZ)



QR Code

Activate the camera on your smart phone and scan this QR code to link to the post-evaluation



Quality Insights on the Web

- Visit our website:
[www.improve.qualityinsights.org/
Projects/PA-DOH](http://www.improve.qualityinsights.org/Projects/PA-DOH)
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Quality Insights website



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Thank You



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Insights

The healthcare improvement experts.

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