

Cardiovascular Health Practice Module

April 2024

The National Cardiovascular Health Program



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Table of Contents

Purpose of Module	3
The Pressure is Off: Partner with Quality Insights	3
Awareness: The Value of Blood Pressure and Cholesterol Targets and Control	5
Social Determinants of Health (SDOH)	6
<i>Screening for Social Needs</i>	6
Utilizing ICD-10-CM Codes (“Z Codes”)	8
<i>Evaluating Blood Pressure</i>	9
<i>Risk-Enhancing Factors for Cardiovascular Health</i>	9
<i>The Surgeon General’s Call to Action to Control Hypertension</i>	10
<i>National Campaigns Support BP Control and/or Cholesterol Management</i>	13
<i>A Practical Solution: Self-Measured Blood Pressure (SMBP) Monitoring</i>	15
<i>Evidence for SMBP</i>	15
Assessment: Knowing the Numbers, Using the Tools	16
<i>Monitoring Blood Pressure Levels in Adults</i>	16
<i>Making a Difference through Accurate Measurement</i>	18
<i>For Patients: BP Measurement Education Resources</i>	18
<i>Monitoring Cholesterol Levels in Adults</i>	19
<i>Monitoring Cholesterol Levels in Children & Adolescents</i>	20
<i>ASCVD Risk Assessment</i>	22
<i>Coronary Artery Calcium (CAC) Score</i>	22
<i>Team-Based Care to Improve Cardiovascular Health and Outcomes</i>	23
<i>Provider Resource</i>	23
<i>Leveraging the Care Team to Address Barriers in Statin Adherence</i>	26
<i>Assessing and Improving Medication Adherence</i>	26
<i>Shared Decision-Making and Statin Choice</i>	28
Action: Implement Blood Pressure Control Programs at Your Practice and Referrals to Lifestyle- Change Programs	28
<i>Evidence-Based Lifestyle Change Strategies and Programs</i>	28
<i>Prevention and Management of CVD Implementation: Resource Library</i>	31
<i>Remote Patient Monitoring</i>	32
<i>The EHR & You: Three Tips to Streamline HTN/HCL Management</i>	33
<i>Reminder: Start Tracking Your Results and Be Recognized</i>	34
<i>Target: BP Recognition Program</i>	35
<i>Quality Insights: We Can Help</i>	36

Purpose of Module

Quality Insights provides on-site and virtual technical assistance at no cost to engaged practices who are dedicated to improving cardiovascular (CV) health across their patient population. As an active participant in the Pennsylvania Department of Health’s National Cardiovascular Health Program, this practice module is designed to support and supplement practice quality improvement efforts related to CV health, hypertension (HTN) and hypercholesterolemia (HCL). This CV Practice Module contains a high-level overview of evidence-based information related to the prevention and management of HTN and stroke. It is designed to promote and supplement your current quality improvement efforts.



Sections are highlighted by the “3 As” – **Awareness, Assessment, and Action** – and include many tools and resources that can also be located on the [Quality Insights website](#).

Target Audience: Healthcare professionals, including physicians, physician assistants, nurse practitioners, nurses, pharmacists, social workers, and care team members, who are involved in the management of cardiovascular disease (CVD) risk factors and patient care.

***Note:** Guidelines referenced in this module are provided in brief, summary format. Complete recommendations should be reviewed in the original publication(s) and utilized with physician/clinician judgment, with consideration given to a patient’s unique needs and circumstances.*

The Pressure is Off: Partner with Quality Insights

[Quality Insights](#) is dedicated to assisting your healthcare team in achieving optimal CV health prevention and management. Through our partnership with the Pennsylvania Department of Health, we offer a wide variety of no-cost services designed to help you improve and reach your quality improvement goals focused on hypertension and stroke prevention and management. Quality Insights provides on-site and virtual technical assistance.

Key services offered by Quality Insights include:

- 1. Workflow Assessments:** Workflow assessments consist of an exploration of current workflows, protocols and processes, including the use of health information technology, team-based care, disease management, and strategies for clinical quality improvement based on ideals within the [Quintuple Aim](#).



- 2. Workflow Modifications:** Quality Insights developed evidence-based transformation solutions to increase practices' proactive outpatient management of patients with HTN and/or HCL. Workflow modifications can be located in the appendix of Quality Insights' Practice Education Modules and on the [Quality Insights Practice Education Module web page](#).
- 3. Technical Assistance:** Quality Insights' Practice Transformation Specialists are available to support your clinical quality improvement goals and improve value-based care in your practice setting at no cost to the practice.
- 4. Achievement Recognition:** Are you making great progress in blood pressure (BP) control in your practice with National Quality Forum (NQF) #0018 Controlling High Blood Pressure reporting above 70% or 80%? If so, Quality Insights can help you apply for national recognition through the [Target: BP™](#) and [Million Hearts® Hypertension Control Champion](#) initiatives. Is your practice a Cholesterol Management Champion? Quality Insights can assist in the [Check. Change. Control. Cholesterol™ Recognition](#) registration process.

Quality Improvement Solutions for You and Your Patients

The services above represent a small sample of Quality Insights' offerings. Discover all the ways the team at Quality Insights can help you and your patients make reducing HCL and achieving BP control the goal by reviewing this [CV Workflow Modification Guide](#). Email [Ashley Biscardi](#) or call **1-800-642-8686, Ext. 137** for more details.



Awareness: The Value of Blood Pressure and Cholesterol Targets and Control




CV health continues to be a top public health priority, with heart disease and stroke maintaining their stature as the first and fifth leading causes of death in both the United States ([Xu et al., 2022](#)) and Pennsylvania ([CDC, 2020](#)), respectively.

Globally, the leading modifiable risk factor for premature CV death continues to be high systolic BP ([Vaduganathan et al., 2022](#)). [HTN](#) is a contributing factor to major health conditions, including heart attack, heart failure, stroke, and kidney failure. Almost 34% of adults in Pennsylvania are diagnosed with high blood pressure, compared to the national average of 32% ([America's Health Rankings, 2022](#)).

The Global Burden of Cardiovascular Diseases and Risk: A Compass for Future Health ([Vaduganathan, et al. 2022](#)) asserts that “multilevel pharmacological and nonpharmacological interventions are needed to address the risks of high blood pressure on health.” The publication also suggests simplifying BP control strategies and emphasizes the vital role of public health strategies in promoting screening, detection, and treatment of HTN.

The [American Heart Association](#) reports, “an estimated 126.9 million U.S. adults are living with at least one type of CVD, and by 2035, persons with CVD will account for nearly 45% of the adult U.S. population. The accumulation of low-density lipoproteins (LDL-C) can lead to plaque deposits and atherosclerosis, increasing the risk of heart attack and stroke. Sadly, LDL-C is on the rise. Globally, in 2020, there were 4.51 million deaths attributable to high LDL-C, a 19% increase from 2010.”

The [2018 Guideline on the Management of Blood Cholesterol](#), published in the journal [Circulation](#), is a complete revision of the 2013 American College of Cardiology (ACC)/American Heart Association (AHA) Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults. It provides current cholesterol-lowering recommendations, including

- “In 2021, 1 in 6 Deaths from CVD Was due to stroke. 
- Every 40 seconds, someone in the U.S. has a stroke. Every 3 minutes and 14 seconds, someone dies of stroke.
- The risk of having a first stroke is nearly twice as high for non-Hispanic Black adults as for White adults, and non-Hispanic Black adults and Pacific Islander adults have the highest rates of death due to stroke.”

Source: [CDC, 2023](#)

lifestyle interventions, statin and non-statin regimens, risk assessment tools, and management of specific patient populations.

Social Determinants of Health (SDOH)

The [2020 Pennsylvania Health Assessment](#) confirms, “Health disparities persist throughout Pennsylvania and the nation, and COVID-19 has underscored and magnified this reality. Residents across the state die prematurely and live with a poor quality of life due to social, economic, service environment, and physical environment factors, which are the social determinants of health.”

SDOH Definition

SDOH are defined as “the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality of life outcomes and risks.”



Source: [Healthy People 2030](#)

Screening for Social Needs

As healthcare providers become increasingly responsible for achieving population health goals, they require tools and strategies to identify the upstream socioeconomic factors that contribute to poor outcomes and higher costs. With this data, providers can transform care with integrated services to meet the needs of their patients, address SDOH, and demonstrate the value they bring to patients, communities, and payers.

Several screening instruments are available to aid practices in identifying SDOH. The following are a sample of options for consideration:



PRAPARE Assessment Tool

The National Association of Community Health Centers’ [Protocol for Responding to and Assessing Patients’ Assets, Risks, and Experiences tool](#) (PRAPARE) is both a standardized patient social risk assessment tool consisting of a set of national core measures and a process for addressing the social determinants at both the patient and population levels. By using PRAPARE, providers can better target clinical and non-clinical care (often in partnership with other community-based organizations) to drive care transformation, delivery system integration, and improved health and cost reductions. A few additional benefits are listed on the next page.

Electronic Health Record (EHR) Integration:

Data from the assessment is transferred directly into many electronic health records (EHRs) as structured data. [EHR templates](#) and [video demos](#) are available for eClinicalWorks, Cerner, Epic, Athena health®, Greenway Intergy, and NextGen.

If the PRAPARE tool is not available within the EHR, a [paper form](#) (available in [30 languages](#)) or [Excel file template](#) can be used to collect standardized data until the EHR template is developed.

When integrated into the EHR, PRAPARE automatically links to relevant [ICD-10 Z codes](#) (where applicable) that can be added to the assessment, diagnostic, or problem list.

Implementation Tools for Practices:

[PRAPARE Readiness Assessment Tool](#): Use this tool to help identify your organization's readiness to implement PRAPARE.

[Implementation Strategy Work Plan](#): Outlines tasks, roles, and responsibilities and provides space to document progress.

Training: Free webinars and resources are accessible from the [PRAPARE website](#) and the [PRAPARE YouTube Channel](#)



American Academy of Family Physicians (AAFP) Social Needs Screening Tool

The AAFP offers the [Social Needs Screening tool](#) through the [EveryONE Project™](#), which can be self-administered or administered by clinical or nonclinical staff. It screens for five core health-related social needs including housing, food, transportation, utilities, and personal safety, using validated screening questions. Additional questions assess employment, education, childcare, and financial strain. The [EveryONE Project™ Toolkit](#) offers a variety of helpful strategies for use in the clinical setting to improve patients' health and address SDOH.



Centers for Medicare & Medicaid Services (CMS) Accountable Health Communities' Health-Related Social Needs Screening Tool

The CMS 10-question [Health-Related Social Needs Screening Tool](#) is a self-administered questionnaire. This tool can help providers identify patients' needs in five core domains that community services can help with, including housing instability, food insecurity, transportation problems, utility needs, and interpersonal safety.



Take the Next Step: The best first step to get started with PRAPARE and/or evaluate your current use of this tool is to review the [PRAPARE Implementation and Action Toolkit](#). If you need assistance or have questions, contact your local Quality Insights Practice Transformation Specialist.

Utilizing ICD-10-CM Codes (“Z Codes”)

Robust data related to patients’ social needs is critical to clinic and hospital efforts to improve the health of their patients and communities. Employing a standardized approach to screening for, documenting, and coding social needs enables sites to:

- Track the social needs that impact their patients, allowing for personalized care that addresses medical and social needs.
- Aggregate data across the patient population to develop a social determinants strategy.
- Identify population health trends and guide community partnerships.

One tool available to capture data on the social needs of a patient population is the **ICD-10-CM codes** included in categories Z55-Z65 (“Z codes”), which identify non-medical factors that may influence a patient’s health status. Existing Z codes identify issues related to a patient’s socioeconomic situation, including education and literacy, employment, housing, lack of adequate food or water, or occupational exposure to risk factors like dust, radiation, or toxic agents. Clinical staff can prioritize the importance of documenting and coding patients’ social needs and allow coders extra time to integrate coding for social determinants into their processes.



Take the Next Step: Download these coding resources for more information about Z codes, including coding categories, frequently asked questions, and addressing common barriers:

- Quality Insights: [Quick Guide to Social Determinants of Health ICD-10 Codes](#)
- American Hospital Association: [ICD-10-CM Coding for Social Determinants of Health](#)
- CMS: [Using Z Codes: The Social Determinants of Health \(SDOH\) Data Journey to Better Outcomes Infographic](#)
- [2022 CMS ICD-10-CM Official Guidelines for Coding and Reporting](#)
- [e-Health Initiative Explains ICD-10-CM Coding for Social Determinants of Health](#)

Evaluating Blood Pressure

The [Centers for Disease Control and Prevention \(CDC\)](#) acknowledges that guidelines used to diagnose HTN may differ among healthcare professionals. According to the [Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure](#), some healthcare professionals diagnose patients with HTN when systolic blood pressure (SBP) ≥ 140 mmHg or diastolic blood pressure (DBP) ≥ 90 mmHg. Controlled BP is defined as SBP < 140 mmHg and DBP < 90 mmHg. According to the [2017 ACC/AHA Guideline](#), alternate diagnosing criteria are considered when SBP ≥ 130 mmHg or DBP ≥ 80 mmHg. Controlled BP is defined as SBP < 130 mmHg and DBP < 80 mmHg.

Blood Pressure Levels			
The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (2003 Guideline) ²		The American College of Cardiology/American Heart Association Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults (2017 Guideline) ¹	
Normal	systolic: less than 120 mm Hg diastolic: less than 80 mm Hg	Normal	systolic: less than 120 mm Hg diastolic: less than 80 mm Hg
At Risk (prehypertension)	systolic: 120–139 mm Hg diastolic: 80–89 mm Hg	Elevated	systolic: 120–129 mm Hg diastolic: less than 80 mm Hg
High Blood Pressure (hypertension)	systolic: 140 mm Hg or higher diastolic: 90 mm Hg or higher	High blood pressure (hypertension)	systolic: 130 mm Hg or higher diastolic: 80 mm Hg or higher

From "[High Blood Pressure Symptoms and Causes](#)," by CDC, 2021.

Risk-Enhancing Factors for Cardiovascular Health

In the [2018 Guideline of the Management of Blood Cholesterol](#), the Risk-enhancing Factors for Clinician-Patient Risk Discussion are outlined on page 13. Although LDL-C is a primary cause of atherosclerosis, other contributing risk factors exist. The **major risk factors** include cigarette smoking, HTN, dysglycemia, and other lipoprotein abnormalities. Because atherosclerosis progresses with age, a person's age also counts as a risk factor. Additionally, the guideline adds factors like family history (see information on [familial](#)

Genetics Matter

Some populations are more prone to certain medical conditions and could have racial and/or ethnic features that could influence risk. Tools used for risk assessment are not always able to provide accurate information about all populations or individuals.

Source: [ACC](#), 2019.



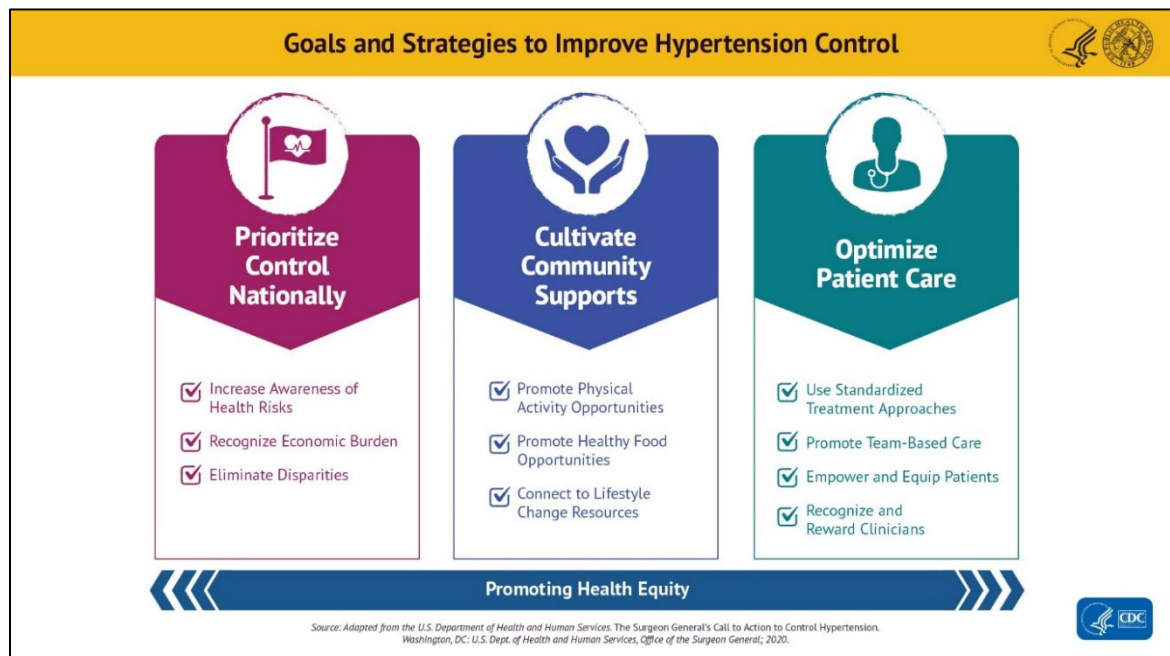
[hypercholesterolemia](#)), ethnicity, and specific health conditions such as metabolic syndrome, chronic kidney disease, chronic inflammatory conditions, premature menopause, pre-eclampsia, and high lipid biomarkers.

- See the American Diabetes Association’s (ADA) [Cardiovascular Disease and Risk Management: Standards of Medical Care in Diabetes--2021](#) for more information on cardiovascular risk management in patients with diabetes and hypertension.
- For additional information on decision-making in preventing atherosclerotic cardiovascular disease (ASCVD), see [ACC 2018 Key Points to Remember on the Use of Risk Assessment Tools to Guide Decision Making](#).

The Surgeon General’s Call to Action to Control Hypertension

[The Surgeon General’s Call to Action to Control Hypertension](#) (Call to Action), released in October 2020, “seeks to avert the negative health effects of hypertension by identifying evidence-based interventions that can be implemented, adapted, and expanded in diverse settings across the United States” ([DHDS](#), 2020).

“The *Call to Action* outlines three goals to improve hypertension control across the United States (US), and each goal is supported by strategies to achieve success” ([CDC](#), 2020).



From [The Surgeon General’s Call to Action to Control Hypertension](#), by CDC, 2020.

Learn more about the *Call to Action*:

- [CDC Prevent and Manage High Blood Pressure website](#)
- [The Surgeon General’s Call to Action to Control Hypertension: How Health Care Professionals Can Help](#)
- [The Surgeon General’s Call to Action to Control Hypertension: How Health Care Practices, Health Centers, and Health Systems Can Help](#)

Preventing and Treating High Blood Pressure is About More than Just the Numbers



A February 17, 2022, [Health and Well-Being Matter](#) feature from Paul Reed, MD, Director, Office of Disease Prevention and Health Promotion, emphasizes that “preventing, identifying, and treating hypertension should be about much more than just measuring BP and prescribing medicine. Instead, addressing high BP should be an exemplar of comprehensive, person-centered care — promoting greater overall health, well-being, and personal resilience.” [Read more on the ODPHP’s blog.](#)

In the Top Ten Take-Home Messages to Reduce Risk of ASCVD through Cholesterol Management ([2018 Guideline on the Management of Blood Cholesterol](#), published in the journal [Circulation](#)) are current cholesterol-lowering recommendations, including lifestyle interventions, statin and non-statin regimens, risk assessment tools, and management of specific patient populations.

A [Guidelines Made Simple summary](#) is also available and highlights key messages as abbreviated below:

Top Ten Take-Home Messages to Reduce Risk of ASCVD through Cholesterol Management

1	In all individuals, emphasize a heart-healthy lifestyle across the life course.
2	Reduce low-density lipoprotein cholesterol (LDL-C) in patients with clinical ASCVD with high-intensity statin therapy or maximally tolerated statin therapy.
3	In very high-risk ASCVD patients, use an LDL-C threshold of 70 mg/dL to consider the addition of non-statins to statin therapy.
4	In patients with severe primary HCL (LDL-C level \geq 190 mg/dL), without calculating 10-year ASCVD risk, begin high-intensity statin therapy.

5	In patients 40-75 years of age with diabetes mellitus and LDL-C \geq 70 mg/dL, start moderate-intensity statin therapy without calculating 10-year ASCVD risk.
6	In adults 40-75 years of age evaluated for primary ASCVD prevention, have a provider-patient risk discussion before starting statin therapy.
7	In adults 40-75 years of age without diabetes mellitus and with LDL-C levels \geq 70 mg/dL, at a 10-year ASCVD risk of \geq 7.5%, start a moderate-intensity statin if a discussion of treatment options favors statin therapy.
8	In adults 40 to 75 years of age without diabetes mellitus and a 10-year risk of 7.5% to 19.9% (intermediate risk), risk-enhancing factors favor the initiation of statin therapy (see #7).
9	In adults 40 to 75 years of age without diabetes mellitus and with LDL-C levels \geq 70 mg/dL at a 10-year ASCVD risk of \geq 7.5% to 19.9%, if a decision about statin therapy is uncertain, consider measuring CAC.
10	Assess adherence and percentage response to LDL-C-lowering medications and lifestyle changes with repeat lipid measurement four to 12 weeks after statin initiation or dose adjustment, repeated every three to 12 months, as needed.

Source: [2018 Guideline on the Management of Blood Cholesterol](#), American College of Cardiology, 2019.



Download the AHA Guidelines on-the-go Mobile App and stay up-to-date no matter where you are. Actionable at the point of care, users will be able to retrieve relevant content while also having access to additional support details and evidence.

- [Download for iPhone/iOS](#)
- [Download for Android](#)

Assessment Resources for Providers:

- [ACC Cholesterol Guideline Tool: Overview of Primary & Secondary Prevention](#)
- [2019 AHA/ACC Special Report: Use of Risk Assessment Tools to Guide Decision-Making in the Primary Prevention of Atherosclerotic Cardiovascular Disease](#)
- [2020 AHA *Circulation*: Cardiovascular Imaging research article: Predictive Value of Coronary Artery Calcium Score Categories for Coronary Events Versus Strokes: Impact of Sex and Race](#)

National Campaigns Support BP Control and/or Cholesterol Management

Several national campaigns are raising awareness of the importance of BP control and cholesterol management to prevent stroke. One such initiative promoted by Quality Insights is [Healthy People 2030](#), the fifth iteration of national public health priorities created by the U.S. Department of Health and Human Services' Office of Disease Prevention and Health Promotion in 1980.



As a [Healthy People 2030 Champion](#), Quality Insights is committed to working toward achieving the Healthy People 2030 vision, a society where all people can achieve their full potential for health and well-being across the lifespan. Healthy People 2030 has several objectives that target BP control, cholesterol management, and address SDOH along to improve CV health and reduce deaths from stroke ([Murphy, et al.](#), 2017, [Benjamin, E.J., et al.](#), 2019).



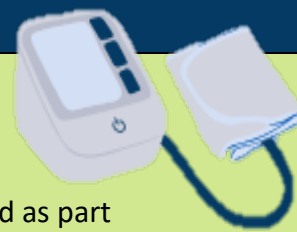
Included in [Healthy People 2030](#) are objectives targeting [increased control of high blood pressure in adults](#) to 18.9%, with 2017-2020 data reflecting that only 16.1% of adults had their BP under control. The initiative additionally targets [increased cholesterol treatment in adults](#) to 54.9%, with 2013-2016 data reflecting a rate of 44.9%. This particular objective is also one of 23 [Leading Health Indicators](#), a subset of high-priority objectives that impact significant causes of death and disease in the United States.

Other [related objectives](#) include:

- Reduce the proportion of adults with high BP
- Reduce the proportion of adults with chronic kidney disease who have elevated BP
- Improve CV health in adults
- Reduce stroke deaths
- Reduce coronary heart disease deaths

Please review the list below for additional resources for healthcare providers and patients.

Blood Pressure Control Initiatives



[Live to the Beat](#) - Led by the CDC Foundation and the Million Hearts® initiative, this is a belief change campaign that promotes heart-healthy eating, physical activity, and working with a healthcare professional to improve the CV health of Black adults 35 to 54 years of age. Also offered as part of the campaign is [Pulse Check](#), an interactive learning tool for those wanting to take charge of their health.

[Know Your Numbers](#) - Launched by the National Forum for Heart Disease and Stroke Prevention, this campaign provides multiple videos and media resources emphasizing the importance of patients knowing their BP, blood sugar, and cholesterol levels to improve and maintain CV health.

[Heart-Healthy Steps](#) - Led by the CDC Foundation and the Million Hearts® initiative, this website supports a heart-healthy lifestyle for adults 55 and over by encouraging small steps to live big. This program is part of the “Start Small. Live Big.” campaign.

[U.S. Department of Health & Human Services Office on Women’s Health Self-Measured Blood Pressure Partnership Program](#) - Quality Insights is a [proud partner](#) of this national network of public and private organizations to amplify and increase knowledge about HTN and CV disease, expand access to [SMBP resources](#), and more.

[National Heart, Lung, and Blood Institute: The Heart Truth®](#) - This health education program focuses on ensuring women know about their risk for heart disease. Review these [high BP education resources](#).

[Release the Pressure Campaign](#)—This coalition of national healthcare professional organizations and heart health experts aims to partner with Black women to support their heart health. Visit their patient-facing website for [BP resources](#).

[Get Down With Your Blood Pressure™](#) or [Éntrale a Bajar tu Presión™](#) - This high BP control campaign is led by the American Medical Association (AMA) and the AHA. It encourages daily monitoring and good communication with the healthcare provider.

[National Hypertension Control Roundtable](#) (NHCR) - This CDC Foundation and National Association of Chronic Disease Directors-led coalition is dedicated to eliminating disparities in blood pressure control by supporting people where they live, learn, work, play, and pray. Quality Insights is a [participating member](#) of the NHCR.

A Practical Solution: Self-Measured Blood Pressure (SMBP) Monitoring

“We have a hypertension problem in the United States. It affects all races and ethnicities, age groups, sexes, and presents throughout the country” ([Wall, H. et al, 2021](#)).

SMBP interventions combined with team-based care or additional clinical support (e.g., educational classes, one-on-one counseling, and telephonic/web-based support) help patients lower their BP, ensure that HTN is diagnosed more accurately, improve access and quality of care, and are **cost-effective**.

Evidence for SMBP

Strong scientific evidence over many years supports the benefits of SMBP. More recent evidence includes:

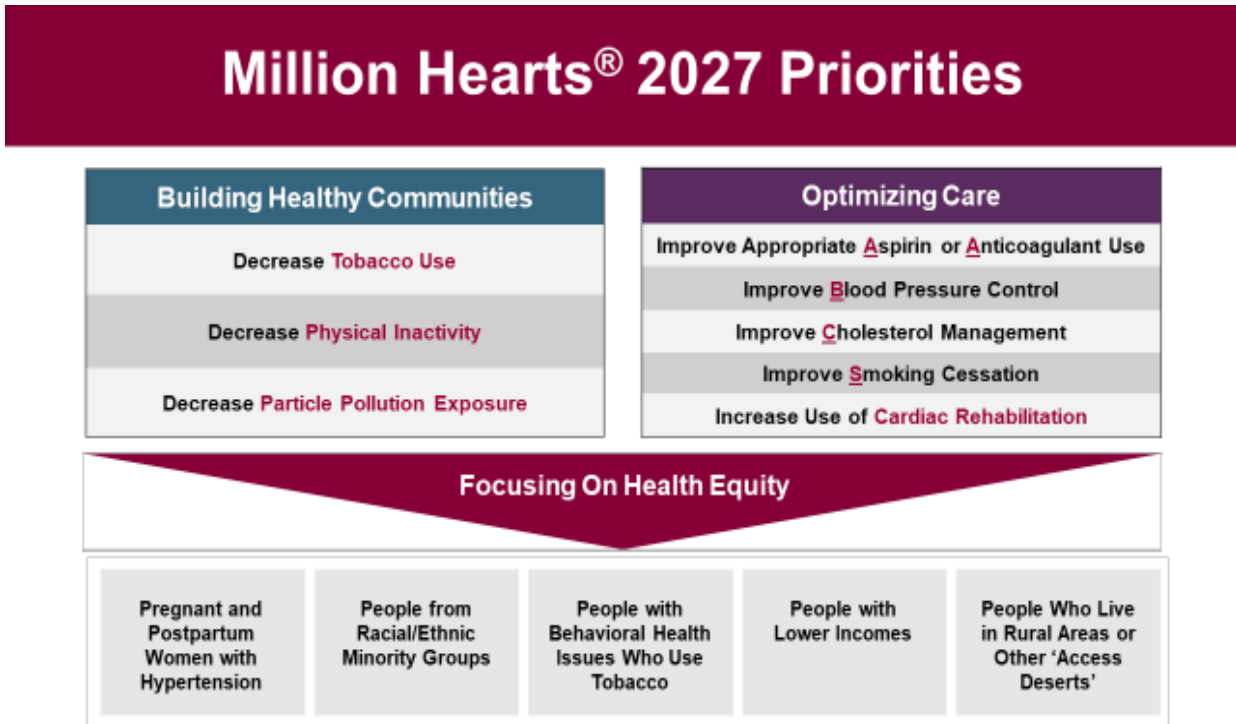
- In April 2021, the U.S. Preventive Services Task Force (USPSTF) issued a [Grade A Final Recommendation Statement](#) recommending “screening for hypertension in adults 18 years or older with office blood pressure measurement (OBPM). The USPSTF recommends obtaining BP measurements outside of the clinical setting for diagnostic confirmation before starting treatment.”
- A 2020 [Joint Policy Statement](#) from the AHA and AMA emphasizes the established clinical benefits and potential cost-effectiveness of SMBP over office BP. Read the [AMA’s 6 Key Takeaways for physicians and health professionals](#).
- A 2020 [Journal of Community Health](#) paper reviewed a 2016-2018 CDC-funded project of the National Association of Community Health Centers (NACHC), the YMCA of the USA, and the Association of State and Territorial Health Officials (ASTHO) to increase the use of SMBP through coordinated action of health department leaders, community organizations, and clinical providers. Nine health centers in Kentucky, Missouri, and New York developed and implemented collaborative SMBP approaches, leading to 1,421 patients with uncontrolled HTN receiving a recommendation or referral to SMBP. Associated SMBP implementation methods, toolkits, and bilingual resources, including recommendations for statin therapy for high-risk patients with HCL, can be accessed on the [National Association of Community Health Centers \(NACHC\) Million Hearts® Initiative web page](#).
- Million Hearts® released the second edition of its [Hypertension Control Change Package](#) in 2020. It features tested tools and resources that have enabled HTN Control



Self-Measured Blood Pressure Monitoring (SMBP) is defined as the regular measurement of blood pressure by a patient at home or elsewhere, outside the clinic setting, using a personal home BP measurement device.

Source: [Million Hearts®](#), 2022.

Champions to achieve high levels of BP control with patients. SMBP-focused content is included as an important aspect of HTN control.



Source: [Million Hearts®](#), 2023.



SMBP Best-Practices Video

Watch the three-minute video, [Collaborative Care Models for Improving Hypertension Control through SMBP Monitoring](#), to learn about best practices used in nine health centers to improve the use of SMBP.

Assessment: Knowing the Numbers, Using the Tools

Monitoring Blood Pressure Levels in Adults

For healthcare professionals utilizing the [2017 ACC/AHA Guideline](#), “Blood pressure is categorized into four levels on the basis of average blood pressure measure in a healthcare setting (office pressures): normal, elevated, and stage 1 or 2 hypertension.” The table provided on the next page reflects these categories.

Categories of BP in Adults*

BP Category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120-129 mm Hg	and	<80 mm Hg
Hypertension			
Stage 1	130-139 mm Hg	or	80-89 mm Hg
Stage 2	≥140 mm Hg	or	≥90 mm Hg

*Individuals with SBP and DBP in 2 categories should be designated to the higher BP category.

Table 6

From [“2017 Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: Guidelines Made Simple, A Selection of Tables and Figures,”](#) by ACC/AHA Task Force on Clinical Practice Guidelines, 2017.

According to the [2017 ACC/AHA Guideline](#), the table below “provides best estimates for corresponding home, daytime, nighttime, and 24-hour ambulatory levels of BP, including the values recommended for identification of hypertension with office measurements.”

Corresponding Values of Systolic BP/Diastolic BP for Clinic, Home (HBPM), Daytime, Nighttime, and 24-Hour Ambulatory (ABPM) Measurements.

Clinic	HBPM	Daytime ABPM	Nighttime ABPM	24-Hour ABPM
120/80	120/80	120/80	100/65	115/75
130/80	130/80	130/80	110/65	125/75
140/90	135/85	135/85	120/70	130/80
160/100	145/90	145/90	140/85	145/90

HBPM, home blood pressure monitoring; SBP, systolic blood pressure/ DBP, diastolic blood pressure; ABPM indicates ambulatory blood pressure monitoring

From [“2017 Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: Guidelines Made Simple, A Selection of Tables and Figures,”](#) by ACC/AHA Task Force on Clinical Practice Guidelines, 2017.

Making a Difference through Accurate Measurement

Accurate BP measurement is essential to estimating CVD risk and guiding the management of HTN. Avoiding common errors can lead to correct diagnosis and speed up treatment time, improving BP control rates. The following sample of resources from [Target: BP™](#) outlines practical approaches to improving BP control for your patients through accurate measurement.



- [BP Positioning Challenge](#): Can you identify common positioning errors? Encourage your staff to take the challenge as a quick means to brush up on proper BP measurement techniques.
- [Measure Accurately Pre-Assessment](#): Use this resource to help your healthcare organization identify areas of opportunity for more accurate BP measurements in the clinical setting.
- [7 Simple Tips To Get An Accurate Blood Pressure Reading](#): Provides information on correctly taking an in-office BP measurement.
- [Technique Quick-Check](#): Resource for determining if providers use proper measurement techniques consistently.
- [CME Course: Measuring Blood Pressure Accurately](#)

For Patients: BP Measurement Education Resources

As important as ensuring accurate BP readings in the clinical setting is, the same is true for patients collecting measurements at home. Review the links below to access important educational resources to guide your patients' participation in SMBP.

Organization	SMBP Patient Resource	Summary
American Medical Association	How to Measure Blood Pressure Accurately	Brief video that reviews seven tips to obtain an accurate BP reading.
	Self-Measured Blood Pressure Cuff Selection	Identify steps to determine the appropriate upper arm cuff size.
Quality Insights	Blood Pressure Tracker	Printable BP log that includes brief instructions for patient use.
	Hypertension Management Apps	Provides a listing of apps available to help patients track their BP readings.

Target: BP™	What is SMBP?	Overview for patients to understand what SMBP is and why it is important.
	SMBP Training Video	Available in English and Spanish, this educational video helps train care teams and patients to properly self-measure BP.
	SMBP Infographic: How to Measure Your Blood Pressure at Home	Steps to perform SMBP monitoring correctly include separation, positioning, and measurement. This document is available to download in English, Spanish, and Vietnamese.

Monitoring Cholesterol Levels in Adults

MONITOR
 People over 20 who do not have CVD should have a risk assessment every 4–6 years.
Source: [AHA](#), 2024.



The [AHA recommends](#) that all adults age 20 or older have their cholesterol (and other traditional risk factors) checked every four to six years as long as their risk remains low. After age 40, a 10-year risk of having a heart attack or stroke should be calculated (see page 8). People with CVD and those at elevated risk may need their cholesterol and other risk factors assessed more frequently.

The guideline outlines these values as acceptable, borderline, and high measurements for adults. All values are in milligrams per deciliter (mg/dL):

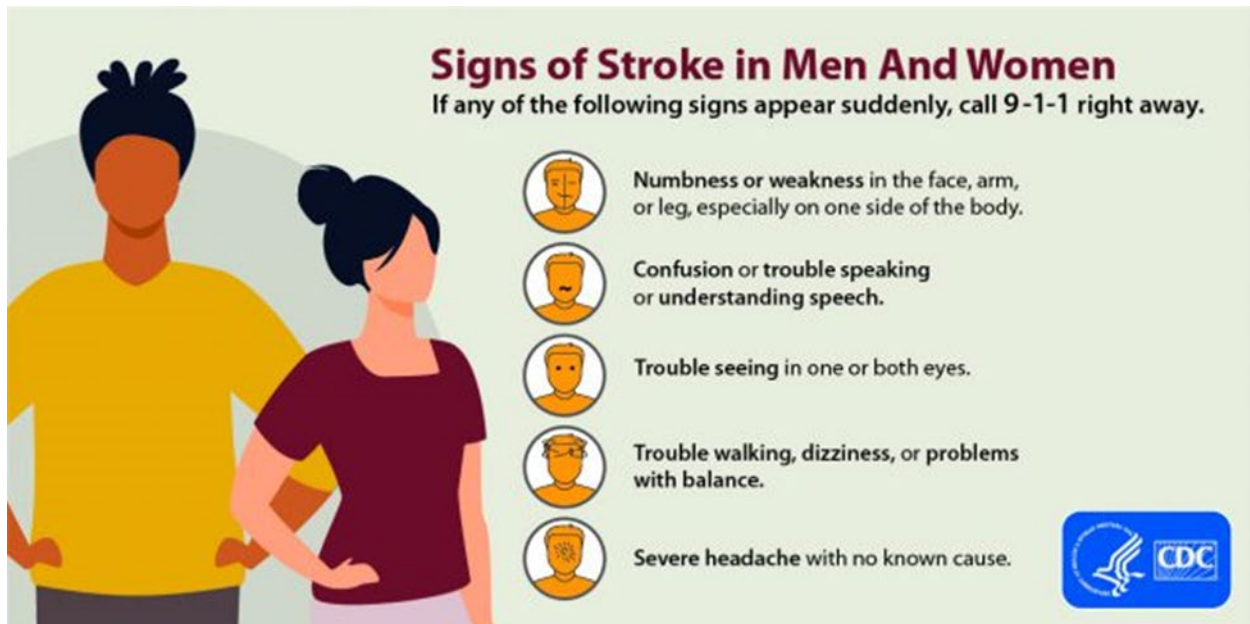
Rating	Total Cholesterol	HDL Cholesterol	LDL Cholesterol	Triglycerides
Good	Less than 200	Ideal is 60 or higher; 40 or higher for men and 50 or higher for women is acceptable	Less than 100; below 70 if coronary artery disease is present	Less than 149
Borderline	200–239	N/A	130–159	150–199
High	240 or higher	N/A	160 or higher; 190 considered very high	200 or higher; 500 considered very high
Low	N/A	less than 40	N/A	N/A

HDL (high-density lipoprotein) cholesterol; LDL (low-density lipoprotein) cholesterol

Source: [National Center for Chronic Disease Prevention and Health Promotion, Division for Heart Disease and Stroke Prevention](#)

An initiative resulting from collaboration between the AHA and the American Stroke Association (ASA), [Target: StrokeSM](#) aims to assist hospitals with decreasing their “door-to-needle” times. This initiative and [Get with the Guidelines- Stroke[®]](#), which is also an in-hospital program to improve the care of stroke patients, aims to promote strict adherence to current scientific guidelines.

Patient education on recognizing early signs of a stroke is critical to improving stroke outcomes.



Source: [CDC](#), 2022.

Monitoring Cholesterol Levels in Children & Adolescents

A scientific statement, [Cardiovascular Risk Reduction in High-Risk Pediatric Patients](#), released by the AHA in 2019, cites that an estimated **6% of all youth 2 to 19 years old (equating to > 4,000,000 children and adolescents) are afflicted with severe obesity in the U.S.** Unlike moderate (class I) obesity or overweight, rates of severe obesity have increased over the past decade.

This report highlights that **children and adolescents may be at higher risk for CVD.** Primary prevention of ASCVD over the

BE ALERT EARLY

Take a “Lifespan” approach to lower heart disease risk, stroke and other major problems. If there’s a family history, it’s reasonable to test children as young as two.

Source: [AHA](#), 2024.



lifespan requires attention to preventing or managing ASCVD risk factors beginning early in life.

Physically active children who have a healthy diet, are not overweight, and do not have a family history of HCL are at a lower risk for having HCL. However, abnormal lipid levels are relatively common in children and adolescents, [affecting approximately 1 in 5 adolescents](#).

In July 2023, the U.S. Preventive Services Task Force (USPSTF) updated its Recommendation Statement for *Lipid Disorders in Children and Adolescents: Screening*. Visit the [USPSTF website](#) to stay up-to-date with the recommendations.



The 2023 guideline prioritizes identifying children, adolescents, and young adults with signs and symptoms of familial HCL, as well as estimating lifetime risk and promoting lifestyle risk reduction. In children and adolescents without cardiovascular risk factors or a family history of early CVD, it may be reasonable to measure a fasting lipid profile or non-fasting, non-HDL cholesterol once between the ages of 9 and 11 years and again between the ages of 17 and 21 years, to detect moderate to severe lipid abnormalities.

However, the USPSTF found insufficient evidence to support screening before age 20 years in asymptomatic children.

The table below includes the recommended cholesterol levels for children according to the guidelines. All values are in mg/dL.

Rating	Total Cholesterol	HDL Cholesterol	LDL Cholesterol	Triglycerides
Good	170 or less	Greater than 45	Less than 110	Less than 75 in children 0–9; less than 90 in children 10–19
Borderline	170–199	40-45	110–129	75-99 in children 0–9; 90–129 in children 10–19
High	200 or higher	n/a	130 or higher	100 or more in children 0–9; 130 or more in children 10–19
Low	N/A	Less than 40	N/A	N/A

Assessment Resources for Providers:

- [ACC Cholesterol Guideline Tool: Overview of Primary & Secondary Prevention](#)
- [AHA Check. Change. Control™ Cholesterol Podcast Series](#): Offers expert insight and discussion on the assessment and management of HCL.
- [ACC Comparison Tool: 2013-2018](#): Review side-by-side comparison of guideline recommendations.
- [ACC Cholesterol Guideline Hub](#): Use the Hub to locate comprehensive, easy-to-navigate resources to help both you and your patients put the guidelines into practice.
- *Journal of the American Medical Association* (August 2021): Research Letter: [Changes in Body Mass Index Among Children and Adolescents During the COVID-19 pandemic](#)



ASCVD Risk Assessment

A quantitative 10-year risk assessment based on the measurement of traditional ASCVD risk factors and the use of a validated risk prediction tool is an important first step in considering treatment options for primary prevention.

The ASCVD Risk Estimator Plus, intended and validated for use in patients aged 40-75 years, is currently recommended for assessing a patient's 10-year CVD risk or lifetime risk estimation in younger adults to inform the intensity of statin dosing. The tool is available through the [ACC](#) and [AHA app](#) or by accessing the [online version](#). A [patient-facing risk calculator](#) is also available from AHA.

Coronary Artery Calcium (CAC) Score

Among patients ≥ 40 years old with an uncertain risk status, calculating the [coronary artery calcium \(CAC\) score](#) is recommended to help with prevention and/or treatment decision-making. This non-invasive computerized tomography (CT) scan of the heart calculates the risk of developing coronary artery disease (CAD) by measuring the amount of calcified plaque in the coronary arteries. For examples of candidates who might benefit from knowing they have a zero CAC score, see page 15 of the [2018 Guidelines Made Simple](#).

Team-Based Care to Improve Cardiovascular Health and Outcomes

The [Community Preventive Services Task Force \(CPSTF\)](#) recommends team-based care to improve a patient's BP control. Team-based care is an approach to achieving BP control in which care is provided by a team consisting of the patient and various health professionals, including primary care providers, pharmacists, nurses, dietitians, social workers, or other health workers, rather than by a single doctor.

Team members work together to help patients manage their medications, increase healthy behaviors, and follow their BP control plan.

A [systematic review](#) of evidence “shows team-based care increases the proportion of patients with controlled blood pressure and reduces systolic (SBP) and diastolic (DBP) blood pressure.” Further, providing team-based care is cost-effective, as determined by CPSTF’s separate review of economic evidence. For additional information, review the full [CPSTF Finding and Rationale Statement](#).

Provider Resource

Unify your team around CV health prevention by reviewing Quality Insights’

[Care Team Interventions to Implement American Heart Association CVD Primary Prevention Guidelines.](#)



Benefits of Team-Based Care and Responsibility for Addressing SDOH

Implementing team-based care is crucial to prevent and reduce CVD risk. Emphasis should be on HTN/HCL prevention, detection, control, and management while addressing social barriers to improve outcomes. It is believed that adding health equity as a fifth goal in healthcare will rapidly improve population health. The medical community can foster and promote inclusiveness in a value-based model by focusing on patient-centered care, population health, cost efficiency, and care team well-being and health equity.



1: Patient Experience



2: Population Health



3: Reducing Costs



4: Care Team Well-Being



5: Health Equity

In an article from the *American Journal of Hypertension*, CDC’s Hilary Wall, Acting Lead, Million Hearts® Science Team, and a team of experts published [“How Do We Jump Start Self-Measured Blood Pressure Monitoring in the United](#)

Adapted from CHES Health Solutions, [The Quintuple Aim](#), 2023.

[States Beyond the Published Literature.](#)” The timeline of federal and national actions started in June 2008, with a Call to Action for using and reimbursing home BP monitoring (see Table 1).

In 2023, we have yet to establish national standards and expansive insurance coverage for blood pressure monitors for home use, which has been a barrier for patients using SMBP. There is a note of the validated device list ([ValidateBP.org](#)) in addition to identifying states that have established Medicaid coverage requirements for BP devices. Team-based care is imperative to establishing an optimal SMBP program in practices with steps for successful implementation and monitoring. The table below displays SMBP tasks by role.

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 modification 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)

Source: [NACHC](#), 2018

The [National Community Health Centers SMBP Implementation Guide](#) provides additional resources to support the implementation of an SMBP program.



Disparities Impact Statement

This tool can be used by all health care stakeholders to achieve health equity for racial and ethnic minorities, people with disabilities, sexual and gender minorities, individuals with limited English proficiency, and rural populations.

Multiple studies assert the need for [standardized treatment protocols](#) and a need to develop targeted strategies for achieving BP control by addressing the [differing barriers](#) of each racial/ethnic group. The [CMS’ Disparities Impact Statement](#) is a tool to assist healthcare stakeholders with identifying, prioritizing, and taking action to achieve health equity for all

populations. According to [CMS](#), “Participants receive personalized technical assistance focused on strengthening your quality improvement program through a series of consultations from

subject matter experts.” Provided on the tool is an email address for Health Equity Technical Assistance.

Review the resources below for more information on how you can strengthen your care team to provide optimal patient care for HTN/HCL management.

Resources for Promoting SMBP

Organization	Resources	Description
CDC	Best Practices for Heart Disease and Stroke	Guide details 18 strategies to address heart disease, stroke, and other cardiovascular conditions.
Target: BP™	Implement SMBP	Step-by-step guidance to help you launch a successful program.
	Target: BP™ Combined Quick Start Guides	Serves as a reference for the care team.
	Webinar: Evolving SMBP Policy and Practice	Discusses policy developments, program design, reimbursement, successes, and challenges associated with SMBP.
Million Hearts®	An Economic Case for Self-Measured Blood Pressure (SMBP) Monitoring	One-pager that provides information on return on investment based on Medicare reimbursement.
	Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians	Guide for implementation of SMBP plus clinical support in four key areas.
	Hypertension Control Change Package (HCCP), 2nd Edition	Presents a listing of process improvements that outpatient clinical settings can implement. It comprises change concepts, ideas, and evidence- or practice-based tools and resources.

Additional Resources:

- Register for the [Million Hearts® SMBP Forum](#) to learn best practices and troubleshoot obstacles with others. The Forum meets online quarterly.
- Quality Insights 2021 White Paper: [Team Up for Quality Care: The Role of Primary Care Teams in Prevention of Cardiovascular Disease](#)
- Success Story: Pennsylvania-based [Million Hearts® Hypertension Control Champions](#)

Leveraging the Care Team to Address Barriers to Statin Adherence

A [2019 article](#) featured in *U.S. Pharmacist* cites nonadherence to statin therapy as a pervasive issue that can lead to poor health outcomes, including CVD-related emergency department visits, health care costs, and mortality. A comprehensive care team approach rooted in understanding the causes behind patient nonadherence and being willing to work with nonadherent patients may improve future adherence or adherence with other caregivers.

Assessing and Improving Medication Adherence

Medication adherence is a significant barrier to the control of HTN and HCL. A [scientific statement](#) (2021) from the AHA listed many factors associated with nonadherence in patients with HTN. The factors include but are not limited to, low health literacy, lack of health care insurance, lack of positive reinforcement from providers, the complexity of medication regimen, provider-patient relationship, lack of provider knowledge about adherence and interventions for improving it, cognitive impairment, chronic conditions, and perceived benefit of treatment. There are many correlating factors present with suboptimal adherence to HCL treatments. In Table 2, there is a list of “Factors Associated with Nonadherence” with patient, provider, and health system-related causes that contribute to nonadherence to dietary and medication recommendations. Shared decision-making with the patient, in addition to a multidisciplinary approach, can improve adherence. Improving these areas will increase quality and reduce costs.

The following resources are available to assist you in improving medication adherence in your practice setting:

- [Quality Insights’ Medication Adherence Practice Module](#) and [Workflow Modification Guide](#): Released in May 2023, these materials provide relevant information for navigating adherence barriers. We invite you to share these tools with your providers and clinical staff.

- The [Medication Adherence Office Protocol](#) can assist medical practices with educating the care team to promote medication adherence and establish an established protocol to ensure communication and education of patients.
- [Adherence Estimator®](#): This tool is a patient-centered resource designed to help you gauge a patient's likelihood of adhering to newly prescribed oral medication for certain chronic, asymptomatic conditions.
- [Free Apps to Help You Better Manage Your Medicines](#): This handout provides a list of useful apps your patients can download to help them track and monitor their medication usage.
- For assistance with addressing health literacy, review Quality Insights' [Health Literacy Supplement](#).

Another evidence-based way to address medication adherence is collaborating with pharmacists as extended team members to provide medication therapy management (MTM). Pharmacists play a crucial role in reducing the risk of heart disease and stroke in the U.S.

For additional guidance on utilizing the skills of pharmacists to improve your patient outcomes:

- The [Pennsylvania Pharmacists Association](#) offers an array of resources promoting and advancing Medication Therapy Management (MTM) in pharmacies statewide. Specifically, the Pennsylvania Pharmacists Care Network (PPCN) is committed to working collaboratively with healthcare providers. Learn more about potential partnership opportunities and [services](#) by visiting the [PPCN website](#).
- [The Pharmacists' Patient Care Process Approach: An Implementation Guide for Public Health Practitioners Based on the Michigan Medicine Hypertension Pharmacists' Program](#): This CDC implementation guide (2021) encourages public health practitioners and health care professionals to collaborate with pharmacists in HTN management through the [Pharmacists' Patient Care Process](#). The guide includes key examples that healthcare teams can replicate in their own programs.



Shared Decision-Making and Statin Choice

The Mayo Clinic's Statin Choice Decision Aid is another recommended, evidence-based, [shared decision-making tool](#) regarding statin choice intervention for treating HCL. This tool assists providers in determining individualized estimation of risks and benefits with and without statins.



Learn more about the Statin Choice Decision Aid and how you can integrate its use into standard practice workflow by [viewing the demo video presentation](#) and accessing the [Statin Choice Toolkit](#).

It is recommended that providers assess medication adherence and efficacy every four to 12 weeks using a fasting lipid test. Based on individualized patient results, retests should then

occur every three to twelve months.

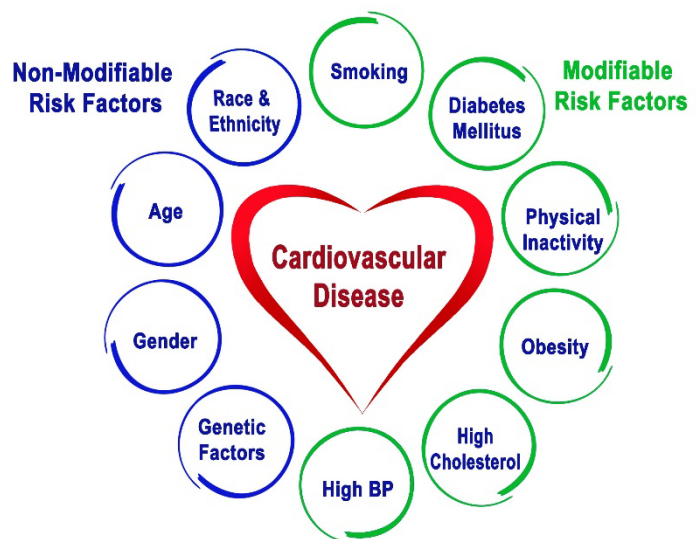
Action: Implement Blood Pressure Control Programs at Your Practice and Referrals to Lifestyle-Change Programs

Evidence-Based Lifestyle Change Strategies and Programs

Living a healthy lifestyle, comprised of a nutrient-dense diet and the inclusion of regular physical activity, is a focal point of the [2019 ACC/AHA Guideline](#).

Lifestyle changes that have proven to be effective include weight loss, a healthy diet with reduced intake of dietary sodium, enhanced intake of dietary potassium, physical activity, and moderation in alcohol intake.

Annually, *U.S. News* and its panel of health experts rank diets on various levels, from their heart healthiness to their likelihood to help one lose weight. [Best Diets 2023](#)



ranked the Dietary Approaches to Stop Hypertension ([DASH](#)) diet second in best diets overall and tied for third in [Easiest Diets to Follow](#).

Including the DASH diet as an example of a healthy dietary pattern in the [Dietary Guidelines for Americans, 2020-2025](#) further bolsters its value. The [National Institutes of Health](#) states that “people following DASH can naturally lower their blood pressure by [3-20 points](#) within weeks or months.”

The following resources may be of assistance to patients who are ready to engage in lifestyle improvement activities:

- The [DASH Eating Plan](#) is a flexible and balanced plan that helps create a heart-healthy lifestyle.
 - From Quality Insights: [DASH Your Way to Lower Blood Pressure](#)
 - Visit the National Heart, Lung, and Blood Institute (NHLBI) website for additional [heart-healthy cooking resources](#) for a wide range of ages and ethnicities.
 - From the NHLBI: In Brief: [Your Guide to Lowering Your Blood Pressure with DASH](#)
- Sodium reduction care team patient resources:
 - [Why Should I Limit Sodium?](#) (AHA)
 - [Sodium in Your Diet: Use the Nutrition Facts Label and Reduce Your Intake](#) (FDA) – English
 - [Sodium in Your Diet: Use the Nutrition Facts Label and Reduce Your Intake](#) (FDA) – Spanish
- [Life’s Essential 8™](#): Information from the AHA on how to manage BP, control cholesterol, manage blood sugar, be more active, eat better, manage weight, quit tobacco, and get healthy sleep.
- [Smoking Cessation Program](#): Listing of national quitlines in various languages, online resources, and medicines to help patients quit smoking.
 - [PA Online Quitline Resources and Chat](#)
 - [PA Free Quitline Promotional Materials](#) order form for tobacco cessation print materials directly shipped to your practice.
- [“Answers by Heart” Blood Pressure Fact Sheets and Multilingual Resources](#), including:
 - [African Americans and High Blood Pressure](#)
 - [High Blood Pressure and Stroke](#)

Sodium Reduction

Encouraging patients to reduce sodium intake typically results in a reduction in BP within weeks. Read about this and other sodium reduction benefits, challenges, and strategies in the CDC’s [Key Messages on Sodium and Sodium Reduction](#).



- [How Can I Reduce High Blood Pressure?](#) (available in [Spanish](#))
- Infographic: [Consequences of High Blood Pressure](#) (available in [Spanish](#) and [Traditional Chinese](#))
- Lifestyle Chart: [What Can I Do to Improve My Blood Pressure?](#) (available in [Spanish](#) and [Traditional Chinese](#))

The CDC recommends the following evidence-based lifestyle change programs as appropriate choices for referral of adults with high BP:

The National Healthy Heart Ambassador Blood Pressure Self-Monitoring (HHA-BPSM) Program is coming soon to locations in Eastern PA. Check the [Quality Insights website](#) for updates on program launches in 2024.

- The HHA-BPSM awardees include:
 - Latino Connection
 - Allentown Health Bureau
 - Health Education Incorporated
 - Maternal and Family Health Services
- [Taking Off Pounds Sensibly \(TOPS\)](#)
- [YMCA Blood Pressure Self-Monitoring Program \(BPSM\)](#): Please contact your local YMCA to see if this program is available in your area.
- [Curves](#): In-club and at-home memberships are now available.
- [WW® \(formerly WeightWatchers\)](#)
- [Supplemental Nutrition and Assistance Program Education \(SNAP-Ed\)](#)
- [Expanded Food and Nutrition Education Program \(EFNEP\)](#)

Take Control with Lifestyle Change Programs in PA

- National HHA-BPSM Program
- [YMCA BPSM](#)
- [National Diabetes Prevention Program](#) (National DPP) many patients with HTN/HCL are eligible for the National DPP. The CDC Risk Test is [here](#).



Quality Insights developed an at-a-glance guide to highlight benefits of [CDC-approved lifestyle change programs](#) available in Pennsylvania. For a handout specific to WW, TOPS, and Curves only, consider this [updated resource](#).

Prevention and Management of CVD Implementation: Resource Library

The following evidence-based resources provide guidance for healthcare sites. Quality Insights invites you to visit each organization’s website for a complete listing of their available tools and resources.

Organization	Implementation Resource	Summary
American Medical Association	U.S. Blood Pressure Validated Device Listing	Listing of BP measurement devices validated for clinical accuracy
	SMBP CPT® Coding	Outlines useful coding information for SMBP and RPM.
	7-Step SMBP Quick Guide	Links to training videos, SMBP/RPM CPT® coding information, infographics, and SMBP logs are included.
American Medical Association	SMBP Program CPT Coding	Provides an overview of the implementation process and reimbursement for healthcare professionals.
National Association of Community Health Centers (NACHC) and Million Hearts®	SMBP Implementation Toolkit	This package consists of worksheets that will help you determine your goals and priority populations, design a protocol, assign tasks, and align your patient training approach to your practice environment.
	Improving Blood Pressure Control for African Americans Roadmap	A quality improvement tool focusing on the most impactful, evidence-based interventions to improve HTN outcomes and reduce disparities.
Public Health Informatics Institute	Health IT Checklist for BP Telemonitoring Software	Quick-reference guide intended to complement the NACHC SMBP Implementation Toolkit.
Quality Insights	SMBP Training	Learn how to partner with Quality Insights to receive no-cost assistance in developing and implementing an SMBP program in your practice.
	Hypertension Academic Detailing	Meet with a Quality Insights PTS to discuss your current practices and make recommendations for quality improvement.

Remote Patient Monitoring

For the prevention and management of chronic disease conditions, the CPSTF recommends [telehealth interventions](#) that can be delivered in a variety of ways, including [Remote Patient Monitoring \(RPM\)](#) and [mHealth](#). [CPSTF asserts](#) that the following conditions can benefit from telehealth interventions: Recently diagnosed CVD, High BP, CVD, diabetes, HIV infection, end-stage renal disease, asthma, or obesity

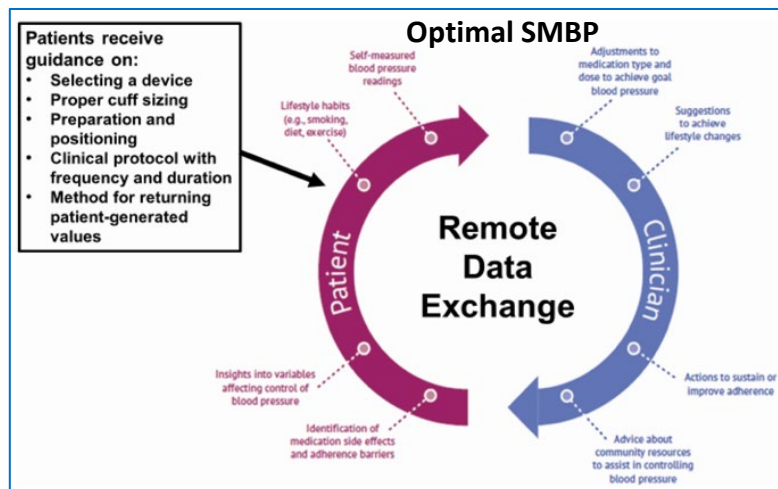
Remote Patient Monitoring

“This is the use of electronic devices to record a patient’s health data for a provider to receive and evaluate at a later time. For example, a patient can use RPM to measure their blood pressure regularly and send this information to their provider.”

Source: [CDC](#), 2021.

According to the [CDC](#), “CPSTF found that the use of telehealth interventions can improve:

- **Medication adherence**, such as outpatient follow-up and self-management goals.
- **Clinical outcomes**, such as blood pressure control.
- **Dietary outcomes**, such as eating more fruits and vegetables and reducing sodium intake.”



From “[How Do We Jump-Start Self-Measured Blood Pressure Monitoring in the United States? Addressing Barriers Beyond the Published Literature](#),” by Wall et al., 2022.

A [2022 article](#) published in the *American Journal of Hypertension* suggests that “optimal SMBP” requires training and education of the patient on device use and the measuring of one’s transmission of BP values, medication side effects, and lifestyle modifications remotely to the providers; review by the providers; remote transmission of guidance on those matters back to the patient; and an indefinite continuance of the patient- providers feedback loop. The [article](#) mentions the difficulty

in quantifying the use of optimal BP but states that there is significant room and a critical need for improvement in the utilization of RPM.

Many nationally recognized healthcare organizations have developed toolkits and resources for practices that implement RPM. A few of these tools include:

- [AMA Remote Patient Monitoring Implementation Playbook](#): Step through the processes of planning and implementing RPM at your practice with this guide.
- [Mid-Atlantic Telehealth Resource Center: Remote Patient Monitoring Toolkit](#): Designed to help audiences quickly understand RPM and determine role responsibilities, this resource offers a variety of engaging videos explaining processes for each role.
- [Federally Qualified Health Center's Remote Patient Monitoring Tool Kit](#): This document is designed to help FQHCs determine which RPM processes will work best for their individual setting. It provides guidance on key areas for consideration when preparing for implementation.
- [NACHC Value Transformation Framework: Community Health Center Requirements for Remote Physiologic Monitoring \(RPM\) & Self-Measured Blood Pressure \(SMBP\)](#): This guide outlines important requirements and coding information for the use of RPM in Community Health Center settings.

The EHR & You: Three Tips to Streamline HTN/HCL Management

Given the limited face-to-face time providers have with their patients, the ability to focus on the patients' needs instead of a screen is critical. Below are three key ways to utilize your electronic health record (EHR) to improve overall hypertension and cholesterol management without losing valuable interaction time.

1. Mind Your Measures

While it can be challenging to keep up with the quality measure landscape, collecting, analyzing, and sharing HTN and HCL management measure data can assist you in raising awareness of opportunities for improvement, measuring the progress of implemented workflows, and strengthening care coordination. If you aren't sure where to start, click to learn more about [CMS #165: Controlling High Blood Pressure](#) and [CMS #347: Statin Therapy for the Prevention and Treatment of Cardiovascular Disease](#).



2. Document Referrals in Structured Data Fields

You may already be in the habit of regularly referring your patients to evidence-based lifestyle change programs that can decrease cholesterol levels. By ensuring that referrals are entered into [structured data fields](#), you can readily account for who and how many patients are being referred, what types of programs are most often utilized, and run reports to ensure feedback reports are obtained from referral partners.

3. Utilize EHR Alerts

Most EHRs have the capacity to provide clinical reminders (also known as [Clinical Decision Support or CDS](#)), a type of alert triggered by a parameter such as time and data, high/low threshold, or clinical indication such as the need to check a patient's cholesterol levels. Using these reminders can be especially helpful in high-volume practice settings where it can be challenging to readily identify or remember important health maintenance information.

While CDS tools are helpful to electronic health record (EHR) users, they are also linked to provider burden and alert fatigue. Users and developers can decrease provider burden if they can improve alert relevance, garner end-user feedback, customize alerts for the care team, measure outcomes and metrics, and continuously optimize, according to a [study](#) published in the *Yearbook of Medical Informatics*. Learn more in this 2022 AHRQ/PSNet article, [Clinician collaboration to improve clinical decision support: the Clickbusters Initiative](#).

Reminder: Start Tracking Your Results and Be Recognized

Quality Insights can assist you in applying for national recognition for evidence-based interventions and/or HTN control through the AHA [Target: BP™](#) initiative if you have reached 70% for National Quality Forum #0018. Once 80% is achieved you may qualify to be a [Millions Hearts® Hypertension Control Champion](#).

Not only will the facility receive recognition from the host organization, but Quality Insights will promote the facility's Million Hearts® achievements on its [website](#). Additionally, Quality Insights honors its partners for their work in successfully managing HTN by awarding **Hypertension Hall of Fame** awards to practices when at least 70% of their patients with HTN have their BP controlled (<140/90). The **2022 Hypertension Hall of Fame** (award for their excellent work in successfully managing HTN) and the **2022 Cardiovascular Disease Prevention Champions** (award for work in successfully managing patients with HCL in the prevention of CVD via statin therapy) winners are listed on the [Quality Insights website](#).

Target: BP Recognition Program

The [Target: BP Recognition Program](#) celebrates provider practices and healthcare systems that treat patients with hypertension for achieving blood pressure control rates at or above 70% or completing evidence-based interventions within the populations they serve. These achievements will ultimately reduce the number of Americans who suffer heart attacks and strokes.

Congratulations to a [record number of healthcare organizations](#) that served 8.6 million patients with hypertension and participated in the program.

Awardees include:

- 866 organizations achieving Gold/Gold+ status for BP control rates $\geq 70\%$.
- 784 organizations achieving Silver status for completing [evidence-based measurement activities](#).
- 59 organizations receiving first-time Participant status for their commitment to improving BP control.

In Pennsylvania, Quality Insights worked with three practices awarded either Gold or Silver status through the Target: BP Recognition Program. Congratulations to the following practices!



Pennsylvania Target: BP Gold Status Practices

Gold status recognizes practices that have 70% or more of its adult patients with high blood pressure in control. Below is a practice working with Quality Insights in Pennsylvania that achieved Gold status.

- Wayne Memorial Community Health Centers



Pennsylvania Target: BP Silver Status Practices

Silver status recognizes practices that submit data and complete 4 out of 6 [evidence-based measurement activities](#). Below are practices working with Quality Insights in Pennsylvania that achieved Silver status.

- Multi-Cultural Health Evaluation Delivery System
- Neighborhood Health Centers of the Lehigh Valley

Quality Insights: We Can Help

A Quality Insights' Practice Transformation Specialist is available to assist your health system, Federally Qualified Health Center, or independent practice in achieving its goal of improving HTN control and HCL management.

If your practice is interested in participating in the program, email [Ashley Biscardi](mailto:Ashley.Biscardi@qualityinsights.com) or call **1.800.642.8686, ext. 137** for more information.

