



Cardiovascular Health Practice Module

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The National Cardiovascular Health Program



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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 Delaware Division of Public Health's (DPH) 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). The module contains a high-level overview of evidence-based information related to the prevention and management of HTN and stroke.

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: Health care 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 a 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.

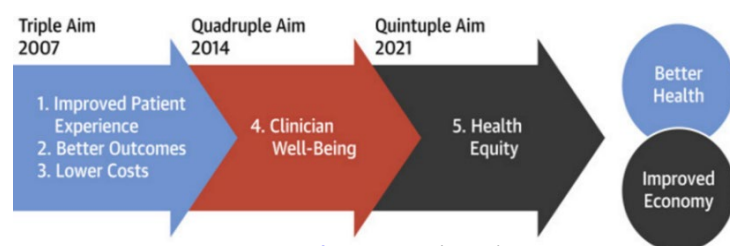
The Pressure is Off: Partner with Quality Insights

[Quality Insights](#) is dedicated to assisting your health care team in achieving optimal CV health prevention and management. Through a partnership with Delaware DPH, Quality Insights offers a wide variety of no-cost services designed to help you improve and reach your quality improvement goals focused on cardiovascular disease prevention and management. Quality Insights provides on-site and virtual technical assistance.

A few 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](#).

Evolution to the Quintuple Aim



Source: [National Library of Medicine \(NLM\)](#),

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 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 represents a small sample of Quality Insights' offerings. Discover all the ways the team at Quality Insights can help you and your patients reach HCL and BP control goals by reviewing this [CVD 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

Cardiovascular 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 Delaware ([CDC, 2021](#)), 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. In Delaware, 36.2% of adults are diagnosed with high blood pressure, compared to the national average of 32.4% ([America's Health Rankings, 2022](#)).

The Global Burden of Cardiovascular Diseases and Risk: A Compass for Future Health ([Vaduganathan, et al., 2022](#)) asserts "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 that “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 lifestyle interventions, statin and non-statin regimens, risk assessment tools, and management of specific patient populations.

- “In 2021, one in six deaths from CVD was due to stroke. 
- Every 40 seconds, someone in the U.S. has a stroke. Every three minutes and 14 seconds, someone dies of stroke.
- 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](#), 2024.

Social Determinants of Health

The [Delaware State Health Improvement Plan \(SHIP\) 2020 Annual Report](#) confirms, “because many

Social Determinants of Health (SDOH)

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



Source: [Healthy People 2030](#).

social and economic factors like education, employment, housing, and income are heavily impacted by structural racism and discrimination, targeting the social determinants of health also provides an important lever for addressing inequities in health outcomes across racial groups. For these reasons, the Delaware SHIP recommends that in order to see meaningful health improvements for all Delawareans, the social determinants of health must be addressed.”

Screening for Social Needs

As health care providers become increasingly responsible for achieving population health goals, they require tools and strategies to identify the upstream socioeconomic factors contributing 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 \(PRAPARE\) Screening Tool](#) 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. 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 detailed on the next page.

Electronic Health Record (EHR) Integration:

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

If the PRAPARE Screening 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](#)



Take the Next Step: The best step to start with PRAPARE and/or evaluate your current use of this tool is to review the [PRAPARE Implementation and Action Toolkit](#). Contact your local Quality Insights PTS if you need assistance or have questions.



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. Using validated screening questions, it screens for five core health-related social needs, including housing, food, transportation, utilities, and personal safety. 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 that 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: For expanded information about SDOH screening and the tools referenced in this section, read the 2018 *Family Practice Management* article titled [“A Practical Approach to Screening for Social Determinants of Health”](#).

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 extra time to integrate the 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 for diagnosing HTN may differ among health care professionals.

- According to the [Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure](#), some health care 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

Source: "[High Blood Pressure Symptoms and Causes](#)," CDC, 2024.

Risk-Enhancing Factors for CV 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 **significant 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 hypercholesterolemia](#)), ethnicity, and specific health conditions such as metabolic syndrome, chronic kidney disease, chronic inflammatory conditions, premature menopause, preeclampsia, 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.

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.

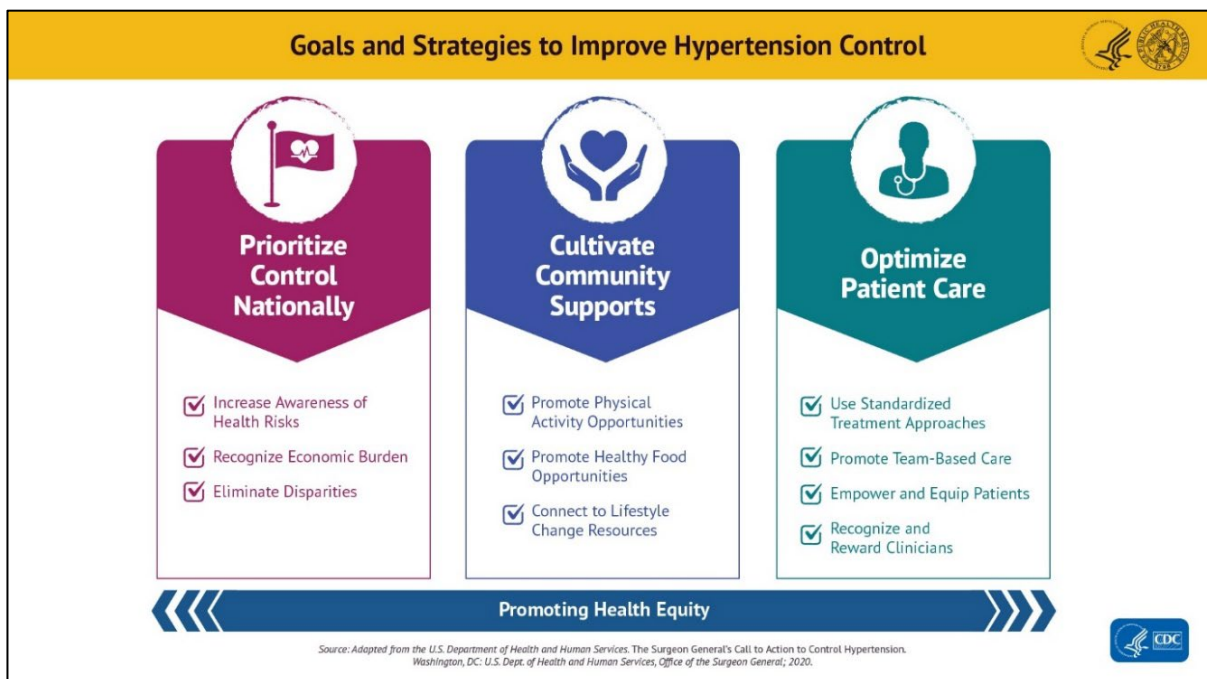
Source: [ACC](#), 2019.

- See [ACC 2018 Key Points to Remember on the Use of Risk Assessment Tools to Guide Decision Making](#) for additional information on decision-making in Atherosclerotic Cardiovascular Disease (ASCVD) prevention.

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” ([DHDSP](#), 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).

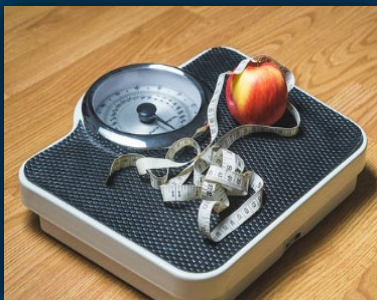


Source: [The Surgeon General's Call to Action to Control Hypertension](#), CDC, 2020.

Learn more about the Call to Action:

- [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](#)
- [CDC's Hypertension Management Program \(HMP\) Toolkit](#)

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.](#)

The [2018 Guideline on the Management of Blood Cholesterol](#), published in [Circulation](#), is a full 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 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 10 Take-Home Messages to Reduce Risk of ASCVD through Cholesterol Management	
1	In all individuals, emphasize a heart-healthy lifestyle across the lifespan.
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), begin high-intensity statin therapy without calculating 10-year ASCVD risk.
5	In patients 40 to 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 to 75 years of age evaluated for primary ASCVD prevention, have a provider-patient risk discussion before starting statin therapy.
7	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%, start a moderate-intensity statin if a discussion of treatment options favors statin therapy.

Top 10 Take-Home Messages to Reduce Risk of ASCVD through Cholesterol Management

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 ≥ 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 coronary artery calcium (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.



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 and 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 in which 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 which aim to improve CV health and reduce deaths from stroke ([Murphy, et al., 2017](#) [Benjamin, E.J., et al., 2019](#)).

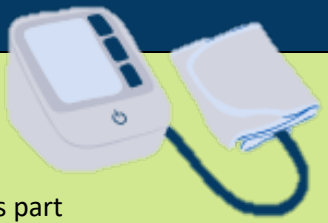


Included in [Healthy People 2030](#) are objectives targeting [increased control of high blood pressure in adults](#) to 18.9%, with 2017 to 2020 data reflecting only 16.1% of adults had their BP under control. The initiative additionally targets [increased cholesterol treatment in adults](#) to 54.9%, with 2013 to 2016 data reflecting a rate of 41%. This particular objective is also one of 23 [Leading Health Indicators](#), a subset of high-priority objectives that impact major 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.

Review the list below for additional resources for health care 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 health care 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.	

Blood Pressure Control Initiatives

[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 health care 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™](#) - The American Medical Association (AMA) and the AHA lead this high blood pressure control campaign. It encourages daily monitoring and good communication with a health care provider.

[National Hypertension Control Roundtable](#) (NHCR) - This CDC Foundation and National Association of Chronic Disease Directors-led coalition is dedicated to eliminating disparities in BP 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:

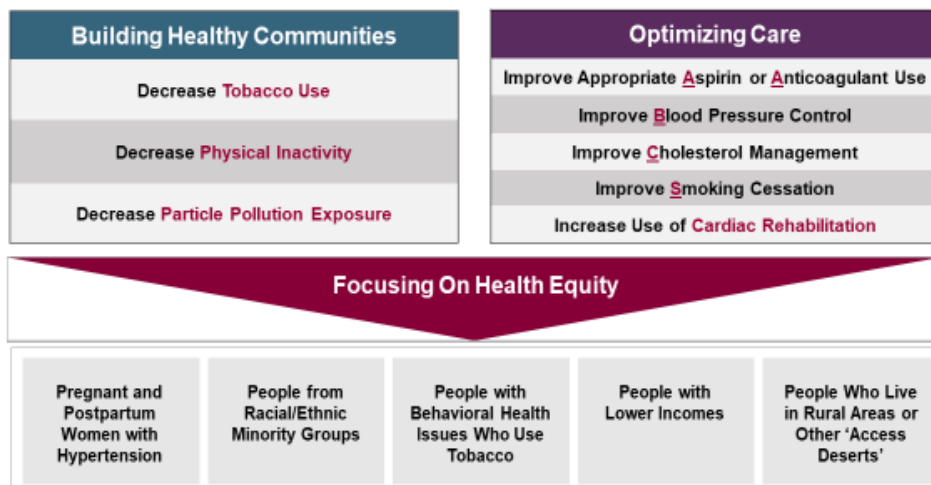


[Self-Measured Blood Pressure Monitoring \(SMBP\)](#) is defined as the regular measurement of blood pressure by a patient at home or elsewhere, outside the clinic setting, using a personal home BP measurement device.

Source: [Million Hearts®](#), 2022.

- The U.S. Preventive Services Task Force (USPSTF) released the [Grade A Final Recommendation Statement](#) in April of 2021 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 reviewing a 2016 to 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 Champions to achieve high levels of BP control with patients. SMBP-focused content is included as an important aspect of HTN control.

Million Hearts® 2027 Priorities



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

Categories of Blood Pressure (BP) in Adults*			
Blood Pressure Category	Systolic Blood Pressure (SBP)		Diastolic Blood Pressure (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 two categories should be designated to the higher BP category.

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 for estimating CVD risk and guiding the management of HTN. Avoiding common errors can lead to correct diagnosis and speed up treatment, 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 health care organization identify areas of opportunity for more accurate BP measurements in the clinical setting.
- [7 Simple Tips To Get An Accurate Blood Pressure Reading](#): This resource provides information on correctly taking an in-office BP measurement.
- [Technique Quick-Check](#): This resource can be used to determine if providers consistently employ the proper measurement technique.
- [CME Course: Measuring Blood Pressure Accurately](#): This one-hour webinar trains health care professionals on the “Measure Accurately” component AMA MAP™ framework. MAP stands for Measure Accurately, Act Rapidly, and Partner with Patients. The webinar reviews current evidence and guidelines related to blood pressure measurement and outline steps teams and individuals can take to measure blood pressure accurately.



For Patients: BP Measurement Education Resources

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

SMBP Educational Resources for Patients

Organization	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	A list 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, which includes 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 four to six 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).

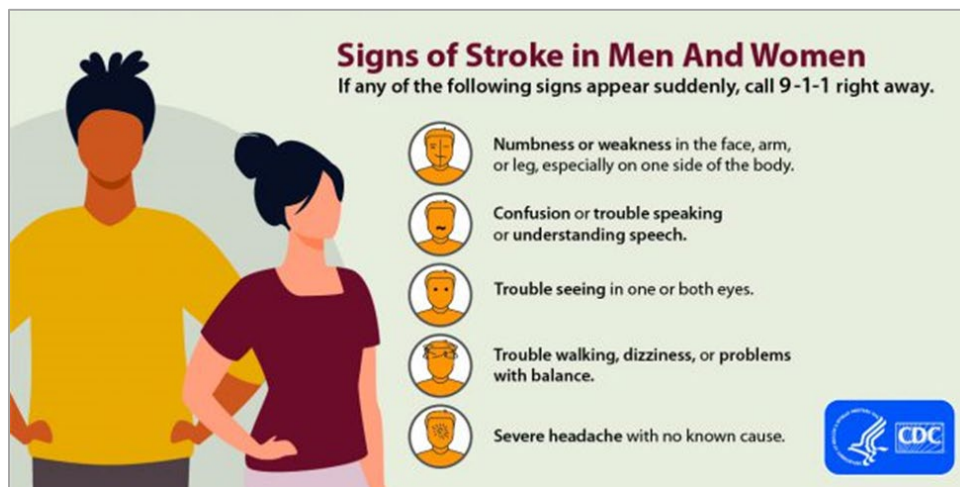
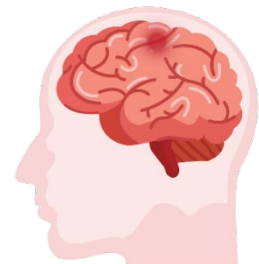
Cholesterol Measurement Guidelines for Adults

Rating	Total Cholesterol (mg/dL)	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	200 to 239 130 to 159 150 to 199	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, [Target: Stroke™](#) 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 key to improving stroke outcomes.



Source: [CDC](#), 2022.

Monitoring Cholesterol Levels in Children and 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 aged 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 lifespan requires attention to preventing or managing ASCVD risk factors beginning early in life. Children who are physically active, 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 one in five adolescents](#).

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.



In July 2023, the 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 cholesterol levels for children as recommended by the guideline can be found below.

Cholesterol Measurement Guidelines for Children

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

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

Assessment Resources for Providers:

- [ACC Cholesterol Guideline Tool: Overview of Primary and Secondary Prevention](#)
- [AHA Check. Change. Control™ Cholesterol Podcast Series](#)
- [ACC Comparison Tool: 2013 to 2018](#)
- [ACC Cholesterol Guideline Hub](#)
- *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

The use of a quantitative 10-year risk assessment, based on the measurement of traditional ASCVD risk factors and with 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 to 75 years, is 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 by app from both the [ACC](#) and [AHA](#), 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.

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](#).



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](#).

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. Adding health equity as a fifth goal in health care is believed to 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.

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

The national standards and expansive insurance coverage for blood pressure monitors for home use, which has been a barrier for patients using SMBP, has yet to be established. There is a note of the



1: Patient Experience



2: Population Health



3: Reducing Costs



4: Care Team Well-Being



5: Health Equity

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

validated device list (ValidateBP.org) in addition to the identification of states that have established Medicaid coverage requirements for BP devices.

View Quality Insights resource for [Delaware Insurance Coverage Options for Home Blood Pressure Monitors](#), along with the [Stellar RX Fax Referral Form](#) for an Omron blood pressure monitor for AmeriHealth Caritas Delaware patients.

Team-based care is imperative to establishing an optimal SMBP program in practices with steps for successful implementation and monitoring. The table below lists SMBP tasks by role.

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 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 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)

Adapted from [NACHC](#), 2018.

Additional resources to support implementing a SMBP program can be found in the [National Community Health Centers SMBP Implementation Guide](#).



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 health care 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.

For more information on strengthening your care team for HTN/HCL management, review the Resources for Promoting SMBP table on the next page.

Resources for Promoting SMBP

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: Delaware-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.

Breaking New Ground in Delaware Health Care Equity

A [2024 article](#) featured in *Healthcare Innovation* discusses the collaboration between ChristianaCare, and Story Health that teamed up to tackle health disparities in Wilmington, Delaware, focusing on HTN and heart failure management. Leveraging Story Health's advanced digital platform, which provides health coaching to patients, the collaboration has resulted in remarkable improvements in medication adherence and health outcomes among Black patients. These outcomes include a 2.6 times increase in beta-blocker adherence, a 2.7x increase in ACE/ARB/ARNIs adherence, a 2.2x increase in MRAs adherence, and a surge in sodium-glucose cotransporter-2 (SGLT2) inhibitors adherence from 32% to 74%.

This partnership is poised to expand, with plans to extend the successful program to ChristianaCare's virtual primary care practice. This move aims to enhance care delivery and prevent hospital admissions, significantly reshaping health care delivery and fostering equitable access to specialized resources for all patients.

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, 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. The statement highlights 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. Quality Insights invites you to share these tools with your providers and clinical staff.
- [Medication Adherence Office Protocol](#) can assist medical practices with educating the care team about promoting medication adherence and establishing a protocol to ensure communication and education to the 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.
- [Pharmacy Resource List and Support Services](#): This handout lists useful websites your patients can access to help with their medication access and usage.

Including a Pharmacist on the Care Team

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 [Delaware Pharmacist Society](#) (DPS) offers various resources promoting and advancing medication therapy management (MTM) in pharmacies statewide. Include a DPS pharmacist as an extension of the care team by referring eligible patients to no-cost MTM. To learn more about potential partnership opportunities and services, view the [DPS MTM Patient Brochure](#). Providers can also refer eligible patients to DPS MTM using the [fax referral form](#).
- [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) is intended to encourage public health practitioners and health care professionals to collaborate with pharmacists in HTN management through the [Pharmacist's Patient Care Process](#). The guide includes key examples that health care teams can replicate in their 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.

View the demonstration video presentation and access the Statin Choice Toolkit to learn more about the Statin Choice Decision Aid and how you can integrate its use into standard practice workflow.

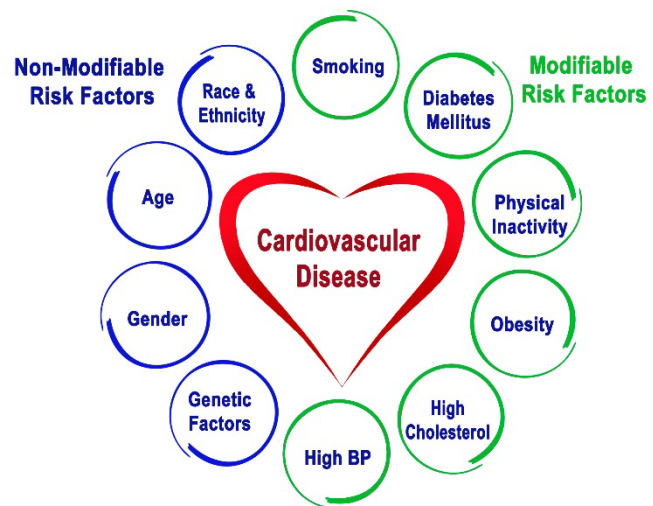
It is recommended that providers assess for medication adherence and efficacy at four to twelve weeks using a fasting lipid test. Retests for adherence and efficacy should then occur every three to 12 months based on individualized patient results.

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 been shown to be effective include weight loss, 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 a range of levels, from their heart healthiness to their likelihood to help one lose weight. [Best Diets 2024](#) ranked the Dietary Approaches to Stop Hypertension ([DASH](#)) diet second in best diets overall and tied for third in [Easiest Diets to Follow](#).



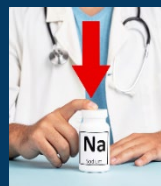
Including the DASH diet as an example of a healthy dietary pattern in the [Dietary Guidelines for Americans, 2020-2025](#) further bolsters its value. According to the [National Institutes of Health](#), “people following DASH can naturally lower their blood pressure by [three to 20 points](#) within 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 eating plan that helps create a heart-healthy lifestyle.
 - Quality Insights: [DASH Your Way to Lower Blood Pressure](#)
 - NHLBI: [In Brief: Your Guide to Lowering Your Blood Pressure with DASH](#)
 - Visit the National Heart, Lung, and Blood Institute (NHLBI) website for additional [heart-healthy cooking resources](#) for a wide range of ages and ethnicities.
- 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.
 - Refer patients to the [Delaware Quitline](#) (1-866-709-1858) program
 - Healthy Delaware offers downloadable and orderable [smoking cessation toolkits](#) for providers
- [“Answers by Heart” Blood Pressure Fact Sheets and Multilingual Resources](#), including:
 - [African Americans and High Blood Pressure](#)
 - [High Blood Pressure and Stroke](#)
 - [How Can I Reduce High Blood Pressure?](#) (available in [Spanish](#))

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](#) (2021).



Listen to Quality Insights’ [Strategies to Improve Tobacco Screening and Cessation](#) podcast with Trina Turner, a doctoral-prepared registered nurse, Lung & Colorectal Screening Nurse Navigator, Face-to-Face Smoking Cessation Coach, and Certified Tobacco Treatment Specialist at Bayhealth.

- 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](#))
- Did you know that people can check out a blood pressure device from your local Delaware library? Click on the Health & Wellness tab on the [Delaware Libraries website](#) for more details.

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

- [Curves®](#): In-club and at-home memberships are now available.
- [Expanded Food and Nutrition Education Program \(EFNEP\)](#)
- [Supplemental Nutrition and Assistance Program Education \(SNAP-Ed\)](#)
- [Taking Off Pounds Sensibly \(TOPS\)®](#)
- [WW® \(Weight Watchers\)](#)

Take Control with Lifestyle Change Programs in Delaware

- [Healthy Heart Ambassador Blood Pressure Self-Monitoring \(HHA-BPSM\)](#) program
- [National Diabetes Prevention Program](#) (National DPP) - Many patients with HTN/HCL are eligible for the National DPP. Download the CDC [Prediabetes Risk Test](#).
- [Diabetes Self-Management Education and Support](#) (DSMES) program
- Check out the Quality Insights resource that highlights the benefits of [CDC-approved lifestyle change programs](#) that are currently available in Delaware.



Prevention and Management of CVD Implementation: Resources

The following evidence-based resources guide health care sites. Quality Insights you to visit each organization's website for a complete listing of their available tools and resources.

CVD Implementation 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 remote patient monitoring (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 health care professionals.
National Association of Community Health Centers (NACHC) and Million Hearts®	SMBP Implementation Toolkit (2022)	Comprised 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	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 Practice Transformation Specialist who can 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 various ways, including [remote patient monitoring \(RPM\)](#) and [mHealth](#). [CPSTF asserts](#) that the following conditions can benefit from telehealth interventions:

- Recently diagnosed CVD
- High BP
- Diabetes, HIV infection, end-stage renal disease, asthma, or obesity

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; and
- **Dietary outcomes**, such as eating more fruits and vegetables and reducing sodium intake.”

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

Many nationally recognized health care organizations have developed toolkits and resources for practices that are implementing 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 the processes for each role.
- [Federally Qualified Health Center's Remote Patient Monitoring Tool Kit](#): This document is designed to help federally qualified health centers (FQHCs) determine which RPM processes will work best for their setting. It provides guidance on key areas for consideration when preparing for implementation.

Remote Patient Monitoring (RPM)

“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](#), 2020

The EHR and You: Tips to Streamline HTN/HCL Management

In the limited face-to-face time providers have with their patients, focusing on their needs instead of a screen is critical. Below are three key ways to utilize your EHR to improve overall 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 about opportunities for improvement, measuring the progress of implemented workflows, and strengthening care coordination. If you aren't sure where to start, review the [CMS #236: Controlling High Blood Pressure](#) and [CMS #347: Statin Therapy for the Prevention and Treatment of Cardiovascular Disease](#) measures to learn more.



2. Document Referrals in Structured Data Fields

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

3. Discover Multi-Directional Referrals

Consider the adoption of [Unite Delaware](#), supported by the Unite US platform, to help coordinate care networks for patients needing health and social service providers.

4. Utilize EHR Alerts

Most EHRs can provide clinical reminders (also known as clinical decision support or CDS), a type of alert triggered by a parameter such as time and date, 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 identify or remember important health maintenance information readily.

While CDS tools are helpful to electronic health record (EHR) users, they are also primarily linked to provider burden and alert fatigue. According to a [study](#) published in the *Yearbook of Medical Informatics*, users and developers can decrease provider burden by improving alert relevance, garner end-user feedback, customize alerts for the care team, measure outcomes and metrics, and continuously optimize. Learn more in this article, [5 Ways to Improve CDS Tools and Gain Clinician Buy-in](#).

5. Employ Patient Portal and Text Messaging Campaigns

Increase patient engagement by utilizing your EHR's portal messaging and, if possible, text messaging. Promote health care access, engagement, and referrals to [Delaware ASSIST](#), the online application and screening for health and social service programs in Delaware. Utilize these resources for the uninsured and underinsured in [Kent and Sussex counties](#) and [New Castle County](#).

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 (70% for National Quality Forum #0018) through the AHA [Target: BP™](#), and once 80% is achieved, [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 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 **2023 Hypertension Hall of Fame** (award for their excellent work in successfully managing HTN) and the **2023 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 health care systems that treat patients with hypertension for achieving BP control rates at or above 70% or those that complete 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 health care 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

Quality Insights worked with practices in Delaware that were awarded Gold+, Gold, or Silver status through the Target: BP Recognition Program. Congratulations on the following practices!

Delaware Target: BP Gold+ Status Practices

Gold+ Status recognizes practices with 70% or more of their adult population with high BP controlled and have completed four out of six evidence-based measurement activities. Below are practices in Delaware that achieved Gold+ Status.

- Bijan Sorouri, M.D., PA
- Stoney Batter Family Medicine
- Sussex Pulmonary and Endocrine Consultants, PA
- TidalHealth Primary Care Millsboro



Delaware Target: BP Gold Status Practices

Gold Status recognizes practices that have 70% or more of their adult patient with high BP controlled. Below is a practice working with Quality Insights in Delaware that achieved Gold Status.

- Delaware Primary Care, LLC



Delaware Target: BP Silver Status Practices

Silver Status recognizes practices that submit data and complete four out of six evidence-based measurement activities. Below are practices working with Quality Insights in Delaware that achieved Silver Status.

- Atlantic Adult and Pediatric Medicine
- TidalHealth Primary Care Bridgeville
- TidalHealth Primary Care Delmar
- TidalHealth Primary Care Georgetown
- TidalHealth Primary Care Laurel North
- TidalHealth Primary Care Seaford



Quality Insights Can Help



A Quality Insights' Practice Transformation Specialist is available to assist your health system, FQHC, 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. 2137** for more information.