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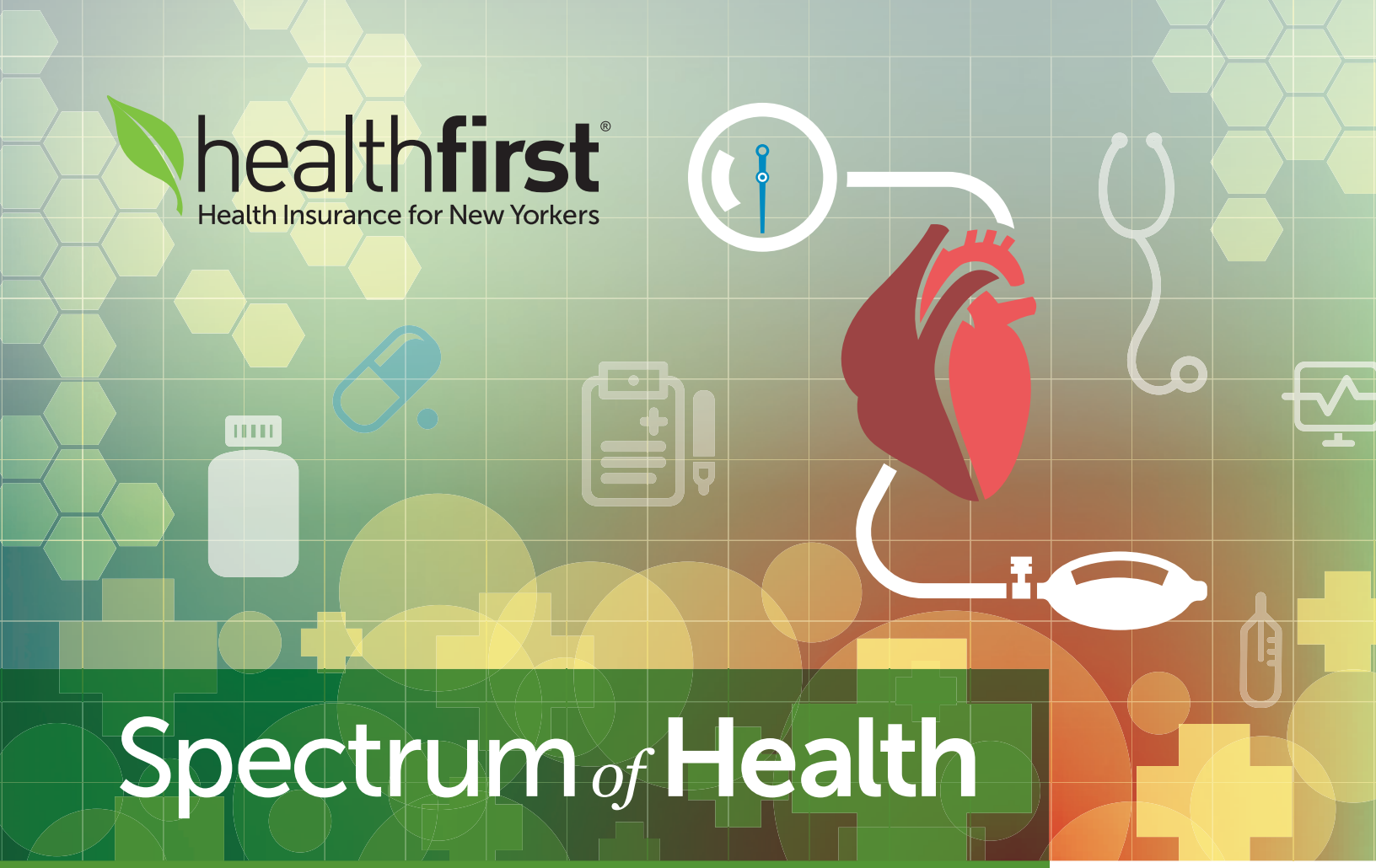


Spectrum of Health

April 2018

Improving Health Outcomes:

Prevention, Detection, Evaluation, and Management of Hypertension

Highlights:

- Roadmap for the Management of Hypertension Based on 2017 ACC/AHA Guidelines
- Patient Perception and Understanding of Diagnosis
- Patient Education and Self-Management Tips and Tools
- HEDIS Quality Reporting Requirements for Hypertension

IMPROVING HEALTH OUTCOMES:
Prevention, Detection, Evaluation, and Management of Hypertension

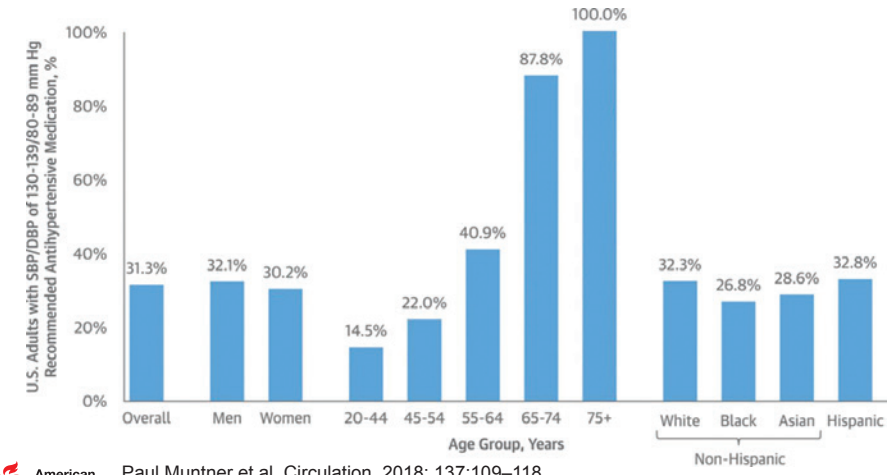
Dear Colleague:

I am excited to share with you an updated roadmap for the Diagnosis, Management, and Control of Hypertension, based on the 2017 ACC/AHA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults (Carey, Whelton, & 2017 ACC/AHA Hypertension Guideline Writing Comm, 2018).

Blood Pressure Level	Systolic	Diastolic
Normal	Less than 120 mm Hg	Less than 80 mm Hg
At Risk (Prehypertension)	120–139 mm Hg	80–89 mm Hg
High	140 mm Hg or higher	90 mm Hg or higher
Hypertensive Crisis	Over 180 mm Hg and/or	Over 120 mm Hg

Based on the 2017 ACC/AHA Guidelines

Percentage of US adults with SBP of 130 to 139 mm Hg or DBP of 80 to 89 mm Hg recommended for antihypertensive medication, according to the 2017 ACC/AHA guideline.



American Heart Association.

Paul Muntner et al. Circulation. 2018; 137:109–118

The 2017 guideline is comprehensive and updates the classification system for BP, including out-of-office BP measurements as critical elements for a plan to reach control for patients, advocating for team-based care and use of electronic health record and telehealth strategies. In addition, based on this guideline, we add recommendations for non-pharmacologic interventions and the choice of antihypertensive drug therapy based on a combination of average BP, ASCVD risk, and comorbidities (Carey, Whelton, & 2017 ACC/AHA Hypertension Guideline Writing Comm, 2018).

Cardiovascular disease continues to lead all other conditions in its negative impact on the longevity and quality of life of our members and communities.

Hypertension affects 43 million adults in the United States; with this guideline, an additional 31% of U.S. adults not currently on medication would be recommended for antihypertensive medication. African-American and Asian adults have comparatively lower rates of antihypertensive medication use, even though their abnormal blood pressure is associated with significant ASCVD risk and comorbidities.

Pediatric care plays a role in BP prevention and detection. The 2017 guideline points out several factors that are shown to increase the likelihood of high BP in adulthood (Whelton P. e., 2017). These include childhood systolic and/or diastolic BP in the upper range for pediatrics, especially when associated with genetic factors and/or obesity and premature birth and low birth weight from other causes.

In this *Spectrum of Health* bulletin, we highlight a pragmatic and evidence-based roadmap to prevention, screening, diagnosis, management, and control of hypertension, including:

- Incorporating evidence-based strategies from the 2017 Guideline to achieve the aim of blood pressure control
- Promoting non-pharmacologic interventions for ALL patients with abnormal blood pressures and hypertension
- Universal screening for how your patients perceive their diagnosis in light of their social norms and context, home- and community-based challenges, and the feeling that they can do what is being asked of them
- Making patient education and self-management tips and tools "usual care" for your practice team
- Using practice-based registries and the HEDIS Quality reporting requirements to monitor progress for your population of patients

Healthfirst joins you and public health, community health, and delivery system partners in a heightened focus on promoting control of high blood pressure. Above all, please know that I appreciate the hard work that you and your staff invest in caring for our members.

Warm regards,

Susan J. Beane, M.D.
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Clinical Partnerships
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Hypertension is a leading risk factor for death and disability-adjusted life-years worldwide. Blood pressure of 120/80 mm Hg or higher is linearly related to risk for fatal and nonfatal stroke, ischemic heart disease, and noncardiac vascular disease, and each increase of 20/10 mm Hg doubles the risk for a fatal CVD event (Carey, Whelton, & 2017 ACC/AHA Hypertension Guideline Writing Comm, 2018).

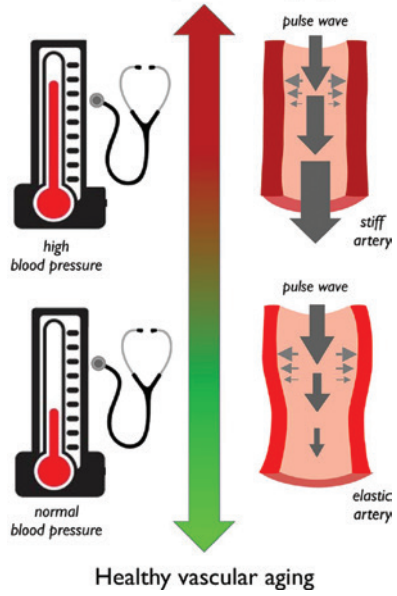
Hypertension: Why it Matters

A comprehensive analysis (Rapsomaniki et al., 2014) assessed the lifetime risks and life-years lost to CVD associated with hypertension. The medical records for 1.25 million patients 30 years of age or older and initially free from cardiovascular disease were analyzed. The findings revealed that 83,098 initial cardiovascular disease events were found during a median of 5.2 years of follow-up between 1997 and 2010.

The analysis for life-years lost was adjusted for sex, smoking, diabetes, and total and high-density lipoprotein cholesterol. Cardiovascular events were defined as one of the following 12 events associated with unhealthy vascular aging:

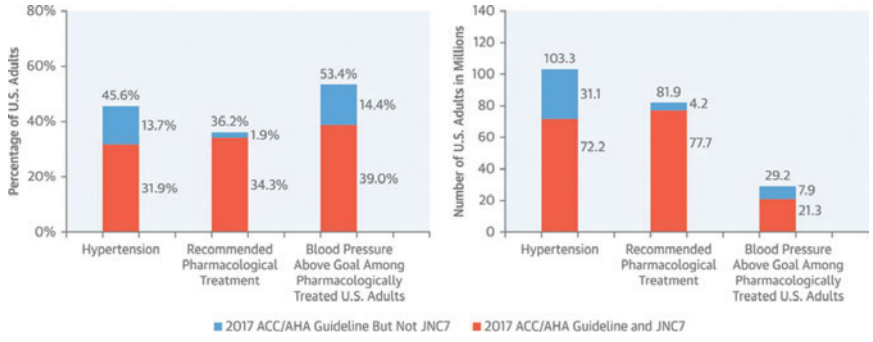
- Stable angina
- Unstable angina
- Myocardial infarction
- Unheralded (sudden) death due to Coronary Heart Disease
- Heart failure
- Cardiac arrest/SCD
- Transient ischemic attack
- Ischemic stroke
- Intracerebral hemorrhage
- Subarachnoid hemorrhage
- Peripheral artery disease
- Abdominal aortic aneurysm

The lowest lifetime risk for cardiovascular events for all ages was at a BP level of 115/75. Higher systolic and diastolic blood pressures were associated with increased risk of cardiovascular disease incidence, in particular angina, myocardial infarction (MI), heart failure, stroke, peripheral artery disease (PAD), and abdominal aortic aneurysm. Increased risk was particularly striking for men and women ages 30–59 (Rapsomaniki et al., 2014).



Kristen L. Nowak et al. Hypertension. 2018; 71:389–402

Prevalence of hypertension, recommendation for pharmacological antihypertensive treatment, and blood pressure above goal among U.S. adults, according to the 2017 ACC/AHA and the JNC7 guidelines.



This graph shows the percentage (left) and number (right) of U.S. adults with hypertension, recommended pharmacological treatment, and with blood pressure above goal among those receiving pharmacological treatment, according to the 2017 ACC/AHA guideline (full bar height), the JNC7 guideline (orange bars), and the 2017 ACC/AHA guideline but not the JNC7 guideline (blue bars).

ACC/AHA • American College of Cardiology/American Heart Association;
JNC7 • Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure.

Paul Muntner et al. Circulation. 2018; 137:109–118

A Framework for Evidence-Based Practice Based on the 2017 ACC/AHA Guidelines

Muntner et al. 2018 illustrate the additional U.S. adults with hypertension recommended for pharmacological treatment based on the 2017 ACC/AHA guideline. The challenge for primary care practices is the additional 14.4% of patients that are receiving pharmacological treatment yet remain above goal. This bulletin recommends a framework to address what is the "new normal" for control of blood pressure with the aim of decreasing the likelihood of cardiovascular complications and mortality.

Practice Roadmap: Detection, Evaluation, and Management of Hypertension

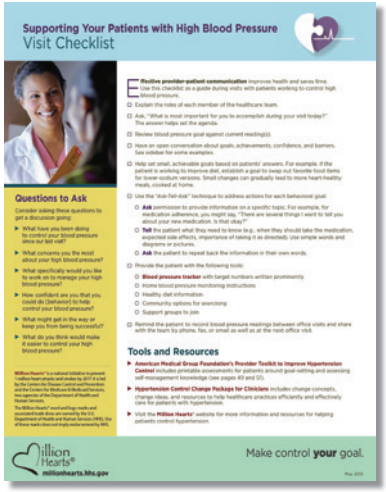
Step 1: Adjust to the "new normal"

- Decision: How will the practice implement the Guideline approach to taking accurate measurements, averaging readings to estimate BP, and encouraging out-of-office BP readings to confirm the office-based diagnosis?
- White-coat and masked hypertension are areas of great focus. How will we educate all practice associates (Whelton & Carey, 2018)?

- The "new normal" BP is <120 / <80
- The BP goal for all patients with hypertension is <130 / <80
  - For ambulatory, community-living patients age > 65 years, the goal is systolic BP <130
  - For stage 1 hypertension with either existing clinical cardiovascular disease or a 10-year atherosclerotic cardiovascular disease risk of > 10%, non-pharmacologic therapy is recommended
    - Adults with hypertension and diabetes, chronic kidney disease, stable ischemic heart disease, or heart failure are likely to be at high risk for developing ASCVD, and antihypertensive drug therapy is recommended
  - For stage 2 hypertension (BP >140 / >90), the recommendation is antihypertensive drug therapy to attain control
    - Most adults requiring drug therapy should be treated initially with two antihypertensive agents

Step 2: Assess and determine the practice workflows that will need to be updated, in particular the appropriate steps to determine an accurate blood pressure reading

- Decision: How will the practice adhere to the Guideline requirement for more than one BP reading, including a reading in each arm at the initial visit, on more than one occasion, to determine the accurate BP level upon which to base treatment, care, and management?
- How will the practice work closely with patients to address factors that may impact adherence, such as medication side effects?
- How will the practice adjust visit types to support frequent and timely follow-up, which may mean more frequent visits until control is achieved?


Supporting Your Patients with High Blood Pressure
Visit Checklist

Questions to Ask

Tools and Resources

Make control your goal.

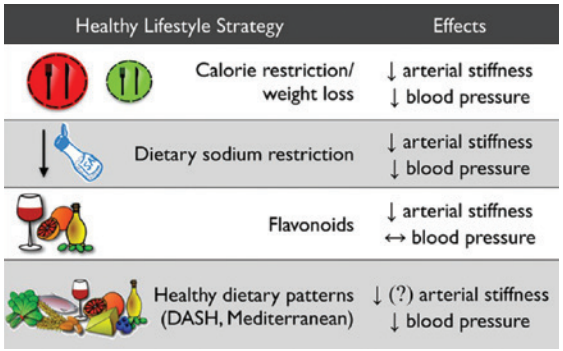
Step 3: Empower patients with knowledge about the management and consequences of high blood pressure, including home blood pressure readings

- Decision: What adjustments must the practice incorporate into materials and workflows to promote knowledge-building among adult patients, as well as a commitment from them to regularly check blood pressure at home?

Step 4: Make non-pharmacologic therapy a core treatment recommendation for all patients

- The Guideline summarizes the current literature and our understanding of the various environmental risk factors that can impact BP (Whelton P. e., 2017)
- Decision: What tools will we use in the practice to address these critical risk factors?
- Do we have a referral network in place to assist with diet-related factors, including excess weight and obesity; excess intake of sodium; insufficient intake of potassium, calcium, magnesium, and protein, especially from vegetables, fiber, and fish fats?
- How will we implement universal screening to identify tobacco and/or alcohol misuse?

Summary of healthy lifestyle-based strategies to decrease blood pressure, maintain or restore healthy vascular aging.



Kristen L. Nowak et al. Hypertension. 2018; 71:389–402

American Heart Association.

Step 5: Hear the voice of your patient's experience in living with hypertension

- How will we remain alert for signs that patients are stressed by the diagnosis or concerned about being stigmatized within their community?
- Is our practice compassionate and supportive as patients attempt to implement the difficult lifestyle modifications that can contribute to hypertension control?
- Is our practice culturally sensitive? Do we avoid words or labels—like "noncompliant" or "you patients"—that hurt patient confidence and destroy patient trust?
- Do we let our patients know that we care about their outcomes? This can make a major difference in the patient experience and engagement

Step 6: Detect and address the social determinants of health that can impact outcomes for hypertension

- Decision: How can we create linkages to enhance the ability of our practice to make meaningful and timely social-factor referrals?
- Are we leveraging the 2017 ACC/AHA Guideline when making medication choices to promote once-a-day dosing with a combination medication and the use of high-efficacy, affordable medications?
- Are we gaining a personal understanding of the reasonable choices that our patients can make in the context of their daily lives? This means understanding their social, economic, and environmental strengths and risks
- Download the Spectrum of Health bulletin *Improving Health Outcomes by Impacting the Social Determinants of Health: A Pragmatic Approach* for help with pragmatic interventions and approaches

Highlights for Detection and Management of Hypertension

Adapted from (Whelton P. e., 2017)

Detecting hypertension		
Reading in each arm, seated on first visit. 1. At the first visit, record BP in both arms. Use the arm that gives the higher reading	Use an average of ≥ 2 readings obtained on ≥ 2 occasions to estimate the individual's level of BP	Provide the reading to the patient verbally (with explanation) and in writing

Detecting white-coat or masked hypertension		
Out-of-office BP measurements are recommended to confirm the diagnosis of hypertension and for titration of BP-lowering medication	For patients on optimal meds but with high office BP readings, consider "white-coat" effect	For patients with target organ damage and normal BP in office, consider "masked-uncontrolled" hypertension

Principles of drug therapy		
Non-pharmacologic interventions should be in place	Most patients requiring antihypertensives should initially receive two "primary" agents	Avoid use of medications requiring multiple doses in a day. Consider combination drugs

Thiazide or thiazide-type agents		
Chlorthalidone is preferred because of proven trial reduction of CVD	Monitor for hyponatremia, hypokalemia, uric acid, and calcium levels	Use with caution in patients with a history of acute gout unless on uric-acid-lowering therapy

ACE Inhibitors/ARBs		
Do not use these drug classes in combination	Risk of hyperkalemia in CKD or those on K+ supplements	Avoid in pregnancy; each class can be associated with angioedema

CCB—dihydropyridines	
Associated wtih dose-related pedal edema, esp. in women	Avoid use in patients with HFrEF; amlodipine orfelodipine may be used if required

CCB—nondihydropyridines		
Do NOT use in HFrEF	Avoid use with beta blockers because of risk of heart block	Monitor for drug interactions with diltiazem and verapamil

Tools and Tips for Collaborating with Your Patients

Tip # 1: Help your patients understand why high blood pressure control is important for their lives and personal goals

When it comes to preventing or controlling high blood pressure, we recommend that you and your team partner with your patients to understand high blood pressure and what it does to the body. The explanation of the risk for sudden death, heart damage, stroke, and damage to the arteries that supply the eyes, kidneys, sexual function, and the lower extremities can persuade patients that non-pharmacologic therapies, home blood pressure monitoring,and, when necessary, medication to reach blood pressure targets lower than 130/80 can be the best path for long life with quality.

Above all, remind patients to talk freely with you and your staff about any and all concerns or questions about hypertension and their likelihood to suffer these consequences. Blood pressure control can be a "good news" story as patients try to achieve long life with quality.

Emphasize to patients that as soon as hypertension is detected, blood pressure control becomes not only desired but critical because of the accumulated burden placed on the arteries, the heart, and the body.

Tip # 2: Prescription for Life: Helping patients make the changes necessary at home and in the community to control blood pressure

The 2017 ACC/AHA Guideline is clear that a core requirement for patient management is addressing the non-pharmacologic drivers of poor blood pressure control. In your "prescription" to patients, consider including the following recommendations[i]:

- Achieve and maintain a **healthy weight** (BMI < 25) by following a Heart Healthy Diet[ii]
  - **Gather baseline diet information:** It might be easiest to get this information through a self-administered diet instrument such as the Rate Your Plate diet tool, a more informal form, or even a two-minute diet history in which patients recall what they typically eat for breakfast, lunch, dinner, and snacks
  - **Start with small diet pattern changes:** For example, patients who drink large quantities of soda could be educated on the importance of eliminating or replacing sugar-sweetened beverages with reduced-calorie beverages or water
  - **Make use of outside nutrition resources such as the DASH diet**
  - **Be sensitive to patient-specific cultural, religious, and economic factors:** Patients should be encouraged and educated on how to adapt the recommended dietary pattern to their personal and cultural preferences
  - **Use motivational and behavioral approaches:** Behavioral counseling comprises two distinct elements—why and how
- **Limit alcohol** (two drinks a day for most men and one drink a day for women and lighter-weight individuals)[iii]

- **Get help to quit smoking:** You and your staff should readily share information about support, counseling, and medication to help your patients quit

  – Patients can contact the NY Quitline at 1-866-NY-QUITS for additional support and coaching

  – **Call the Asian Smokers' Quitline.** Another way to find support is by calling the Asian Smokers' Quitline—free, nationwide telephone assistance for Chinese- , Korean- , and Vietnamese-speaking members who want to quit smoking

  Chinese (Cantonese and Mandarin): **1-800-838-8917**
  Korean: **1-800-556-5564**
  Vietnamese: **1-800-778-8440**

- **When medications are required,** timely follow-up and close collaboration with patients can shorten the timeline to control:

  – For adults with hypertension and diabetes, chronic kidney disease, stable ischemic heart disease, or heart failure who are likely to be at high risk of developing ASCVD or stage 2 hypertension (that is, BP >140 / >90), the recommendation is antihypertensive drug therapy to attain control:

  • **Most adults requiring drug therapy should be treated initially with two antihypertensive agents**

  • Proactively including patients in the decision-making process can achieve the aim of clarity and collaboration around the patient's concern and your aims with regard to the treatment plan

Rx to Achieve a Healthy BP

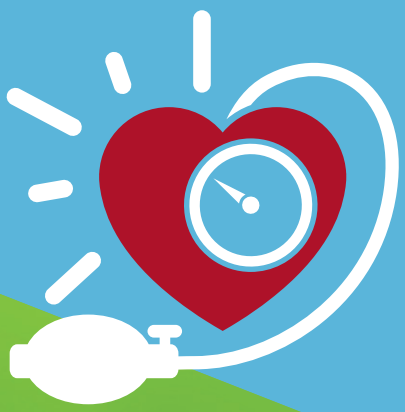
- Weight loss to lower BP in adults who are overweight or obese
- A heart-healthy diet, such as the DASH (Dietary Approaches to Stop Hypertension) diet, that facilitates achieving a desirable weight
- Sodium reduction for adults
- Potassium supplementation, preferably in dietary modification, unless contraindicated
- Increased physical activity with a structured exercise program
- Adult men and women who currently consume alcohol should be advised to drink no more than 2 and 1 standard drinks* per day, respectively

Recommended by _____ PCP

Date _____

I am in agreement _____ Patient

*In the United States, 1 "standard" drink contains roughly 14 g of pure alcohol, which is typically found in 12 oz of regular beer (usually about 5% alcohol), 5 oz of wine (usually about 12% alcohol), and 1.5 oz of distilled spirits (usually about 40% alcohol).



Tools and Tips for Collaborating with Your Patients *(continued)*

Tip # 3: Consider the impact of social determinants on health

- Multiple factors can positively impact the power of patients to benefit optimally from hypertension management:
  - A good relationship between patient and physician, with active participation in management of disease
  - Monotherapy; simple dosing schedules with few changes in medications
  - Understanding and perception of the cardiovascular health risk related to hypertension
  - Family preparedness and ability to afford medications; reliable and uninterrupted supply system for medicines

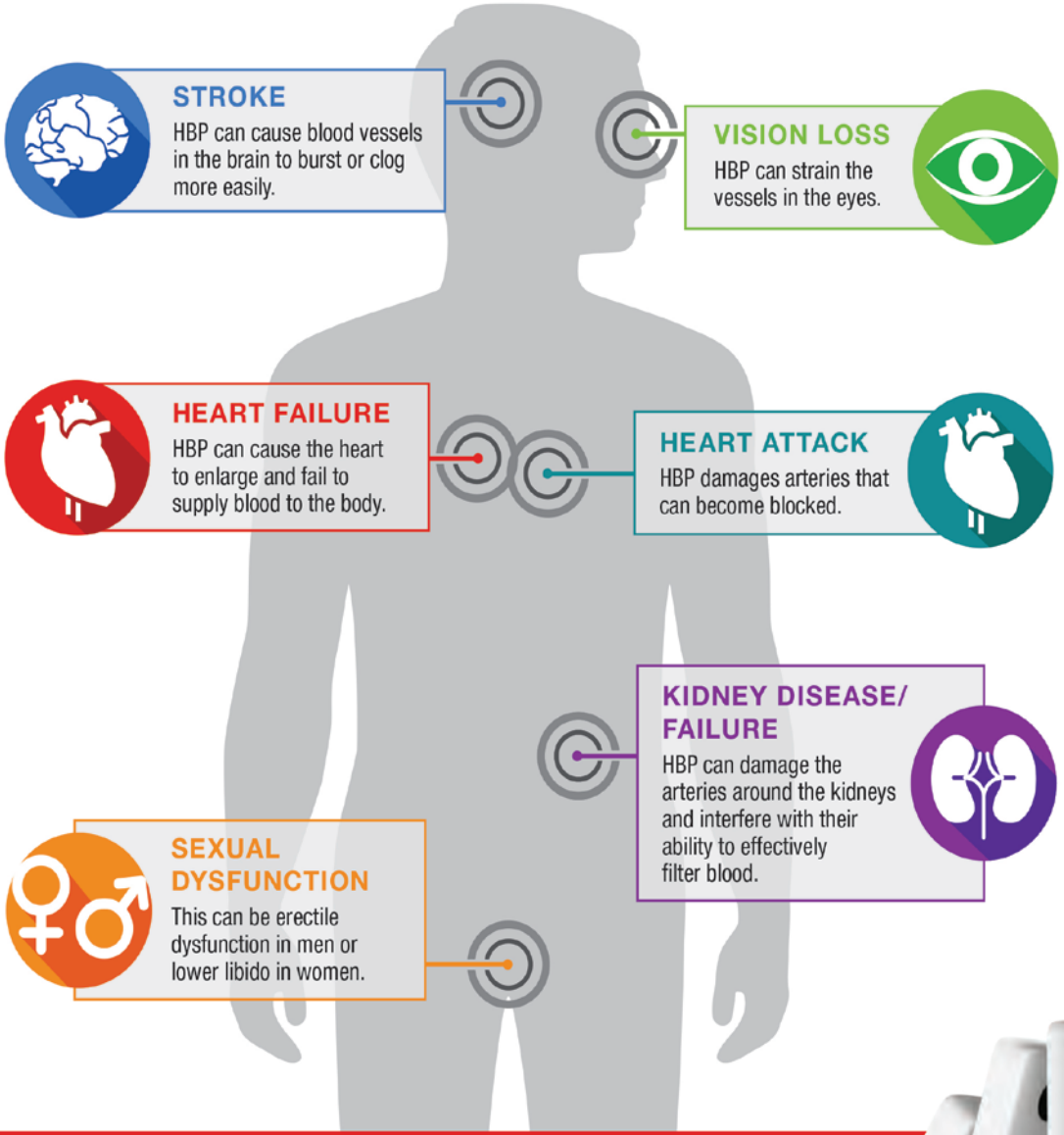
Hypertension	(–) socioeconomic status; illiteracy; unemployment; limited drug supply; high cost of medication	(–) Lack of knowledge and training for healthcare providers on managing chronic diseases; inadequate relationship between healthcare provider and patient; lack of knowledge; inadequate time for consultations; lack of incentives and feedback on performance (+) Good relationship between patient and physician	(+) Understanding and perceptions about hypertension	(–) Complex treatment regimens; duration of treatment; low drug tolerability, adverse effects of treatment (+) Monotherapy with simple dosing schedules; less frequent dose; fewer changes in antihypertensive medications; newer classes of drug: angiotensin II antagonists, angiotensin converting enzyme inhibitors, calcium channel blockers	(–) Inadequate knowledge and skill in managing the disease symptoms and treatment; no awareness of the costs and benefits of treatment, non-acceptance of monitoring (+) Perception of the health risk related to the disease; active participation in monitoring; participation in management of disease	Family preparedness; patient health insurance; uninterrupted supply of medicines; sustainable financing, affordable prices and reliable supply systems

Download the full ***Spectrum of Health*** **bulletin on *Improving Health Outcomes by Impacting the Social Determinants of Health: A Pragmatic Approach*** at **www.healthfirst.org/ClinPartnerships**.

CONSEQUENCES
of High Blood Pressure

American Heart Association | American Stroke Association
life is why
Check. Change. Control.

High blood pressure is often the first domino in a chain or "domino effect" leading to devastating consequences, like:



STROKE
HBP can cause blood vessels in the brain to burst or clog more easily.

VISION LOSS
HBP can strain the vessels in the eyes.

HEART FAILURE
HBP can cause the heart to enlarge and fail to supply blood to the body.

HEART ATTACK
HBP damages arteries that can become blocked.

KIDNEY DISEASE/ FAILURE
HBP can damage the arteries around the kidneys and interfere with their ability to effectively filter blood.

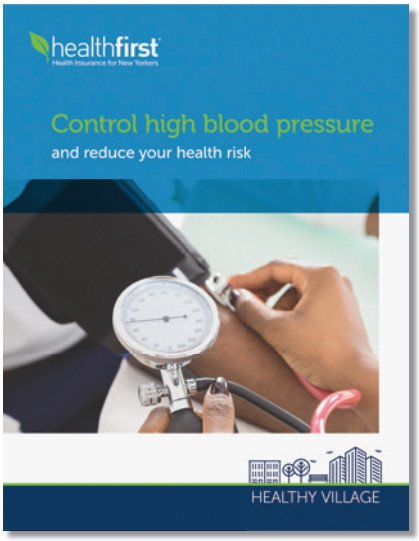
SEXUAL DYSFUNCTION
This can be erectile dysfunction in men or lower libido in women.

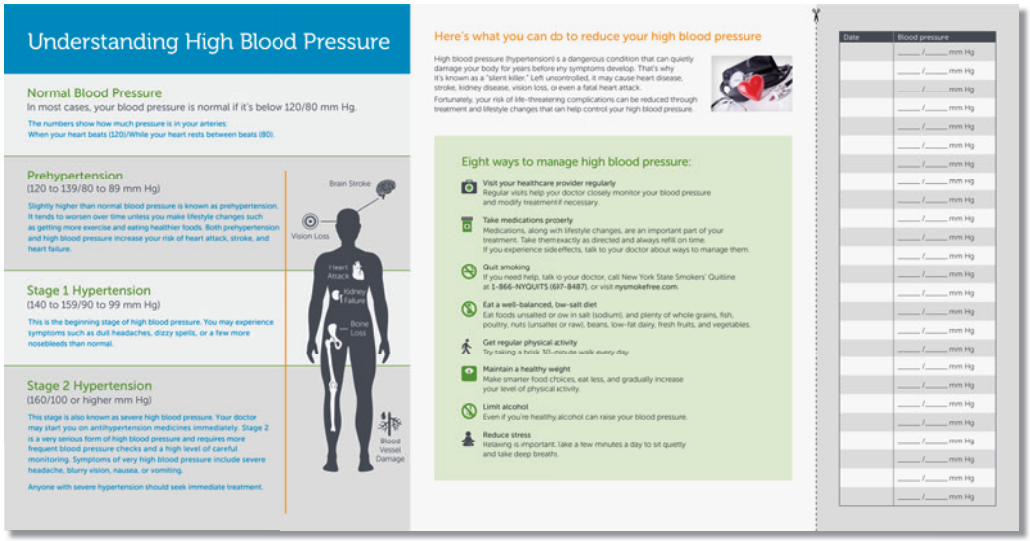
A simple **blood pressure check** is the first step to preventing the "domino effect."

Learn more at **heart.org/hbp**.

Tools and Tips for Collaborating with Your Patients *(continued)*

Tip # 4: Stock the office with materials that you will use to empower your patients with knowledge about the accumulated impact of high blood pressure, and how the practice will work with them to achieve control





Resources to help your patients get and stay healthy, manage a condition, and live well are available at **www.healthfirst.org/live-healthy**.

Summary of HEDIS Requirements for Hypertension

MEASURE: CONTROLLING HIGH BLOOD PRESSURE (CBP)

How members are identified:

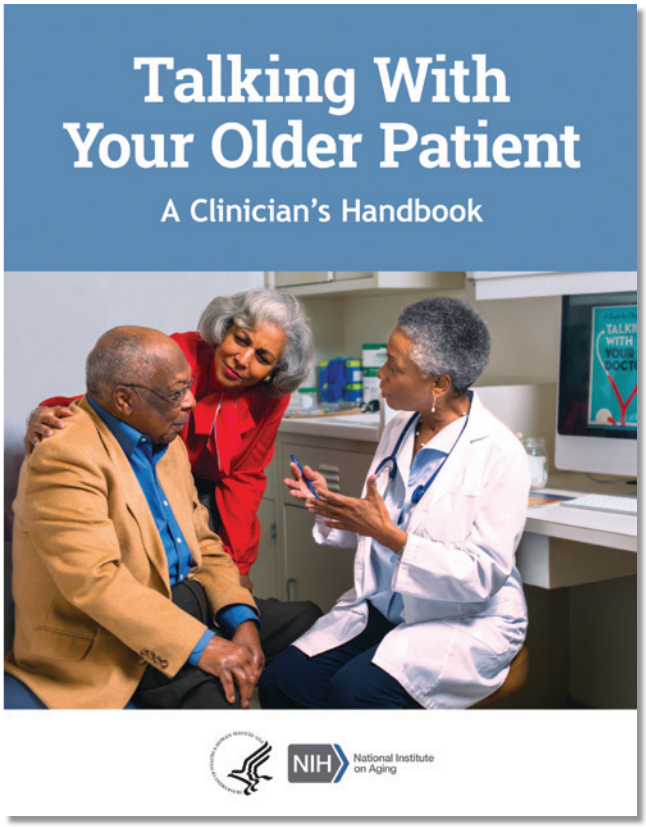
The percentage of members 18–85 years of age who had a diagnosis of hypertension (HTN)

Requirements

- Most recent BP is adequately controlled during the measurement year. Adequate control is defined as meeting any of the following criteria:
  - Members 18–59 years of age whose BP was < 140/90 mm Hg
  - Members 60–85 years of age with a diagnosis of diabetes whose BP was < 140/90 mm Hg
  - Members 60–85 years of age without a diagnosis of diabetes whose BP was < 150/90 mm Hg

Frequently Asked Questions Regarding Improving Outcomes for Hypertension

How can I encourage my patients to initiate lifestyle modifications to improve their cardiovascular health?



These are difficult conversations to have with any patient. *Talking With Your Older Patient: A Clinician's Handbook: Supporting Patients With Chronic Conditions*[iv] shares best practices that can be applied to any patient, no matter the age. The following excerpts from this handbook can help you inform patients and their caregivers about medical conditions and their treatment:

- **Doctors' advice generally receives greatest credence,** so the doctor should introduce treatment plans.
  - **Try to take a universal, non-threatening approach.** Start by saying, 'Many people your age experience…' or 'Some people taking this medication have trouble with…' Try, 'I have to ask you a lot of questions, some that might seem silly. Please don't be offended…'
  - **Let your patient know you welcome questions.** Indicate whom on your staff he or she can call to have questions answered later.
  - **Encourage the patient or caregiver to take notes.** It's helpful to offer a pad and pencil. Active involvement in recording information may promote your patient's retention and adherence. Check that the patient and his or her caregivers understand what you say. One good approach is to ask that they repeat the main message in their own words. **Repeat key points about the health problem and treatment at every office visit.**
  - **Provide encouragement.** Call attention to strengths and ideas for improvement.
  - Some patients avoid issues that they think are inappropriate for their own clinicians. One way to overcome this is to **keep informative brochures and materials readily available in the waiting room**. In addition to talking to the patient, you can use fact sheets, drawings, models, videotapes, or audiotapes. In many cases, referrals to websites and support groups can be helpful.

[i] http://www.onlinejacc.org/sites/default/files/guidelines/2017_blood_pressure_guideline_slides.ppt. Slides 33-34. Accessed 4/3/18.

[ii] Translating the ACC/AHA Lifestyle Management Guideline into Practice: Advice for Cardiologists from Experts in Nutrition, Behavioral Medicine, and Cardiology – American College of Cardiology. www.acc.org/latest-in-cardiology/articles/2015/12/31/10/12/translating-the-acc-aha-lifestyle-management-guideline-into-practice. Accessed July 13, 2017.

[iii] www.heart.org/HEARTORG/Conditions/HighBloodPressure/MakeChangesThatMatter/Limiting-Alcohol-to-Manage-High-Blood-Pressure_UCM_303244_Article.jsp#.WWeOSj_rvq4. Accessed July 13, 2017.

[iv] www.nia.nih.gov/health/publication/talking-your-older-patient/talking-about-sensitive-subjects. Accessed April 17, 2018.