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# **Ambulatory Care Quality**

Hypertension (High Blood Pressure) Management

## Objective

Decrease the risks of heart attack, stroke and death for hypertensive patients by effectively managing their high blood pressure.

#### Rationale

Recent prevalence estimates show that 46 percent of adults in the United States have high blood pressure. This one-year measure is to improve the percentage of adult patients with a diagnosis of hypertension for whom blood pressure is adequately controlled, i.e., less than 140/90 mmHg.

Hypertension is a significant contributing factor to hospital admissions and hospital costs. According to the American Heart Association, individuals with hypertension face nearly \$2,000 higher annual health care expenditure compared with their non-hypertensive peers. Furthermore, it is estimated that the prevalence of hypertension will increase by more than 9 percent by 2030.

Across CommonSpirit Health, preliminary performance data suggests that just over 60 percent of patients with a diagnosis of hypertension have blood pressure that is under control. Therefore, there is an opportunity for

112,000 CommonSpirit patients to reduce their risk for heart attack, stroke, or even death by achieving better blood pressure control.

This measure is included in Centers for Medicare and Medicaid Services (CMS) pay-for-performance programs including various Accountable Care Organization (ACO) agreements and the Meritbased Incentive Payment System (MIPS) for eligible Medicare providers.

#### Metric

Percentage of patients 18-85 years of age who had a diagnosis and/or active problem of hypertension and whose blood pressure was adequately controlled (<140/90 mmHg) during the measurement period.

#### Numerator

Patients whose most recent blood pressure during the measurement period is adequately controlled (systolic blood pressure <140 mmHg and diastolic blood pressure <90 mmHg).

#### Denominator

Patients 18 - 85 years of age who had a diagnosis or active problem of essential hypertension and an encounter during the measurement period.



## **Inclusion Criteria**

- Patients with an ambulatory encounter during the measurement period that meet one out of the two criteria listed below:
  - Have hypertension active on their problem list during the measurement period
  - Have a diagnosis of hypertension on a posted encounter during the measurement period
- Ambulatory patients seen by providers who are either employed or contracted within clinics that are affiliated with CommonSpirit Health and that utilize an owned instance of Cerner, Epic or Allscripts EHR.

## **Exclusion Criteria**

- Patients with evidence of end stage renal disease (ESRD) before or during the measurement period
- Dialysis before or during the measurement period
- Renal transplant before or during the measurement period
- Chronic kidney disease stage 5 (CKD) before or during the measurement period
- Pregnancy during the measurement period
- · Deceased during the measurement period
- Hospice status during the measurement period
- Patients belonging to Sequoia Physicians
   Network during measurement period

ICD codes associated with the inclusion/exclusion criteria are available upon request through National Quality Contacts

## **National Contact - Quality**

Debra Rockman, RN, MBA, CPHQ, CPHRM Kelly Bitonio, BSN, MHA, NEA-BC

# **Physician Champion**

Dr. Gary Greensweig, CPE, Physician Enterprise

#### **Data Source**

CommonSpirit instance of Cerner, Epic or Allscripts electronic health record systems



# **Frequently Asked Questions**

- Why was the hypertension measure criteria selected as 140/90 when latest society recommendations cite the threshold for BP-lowering medication as 130 mm Hg or higher systolic or diastolic of 80 mm Hg or higher for those patients with Clinical Atherosclerotic Cardiovascular Disease (ASCVD) or an estimated 10-year Cardiovascular Disease (CVD) risk of 10%?
- Mhile recognizing the importance of recommendations generated from the ACC 2017 Guideline for Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults, the Hypertension measure was selected based on its alignment with the Centers for Medicare & Medicaid Services Merit-based Incentive Payments (CMS-MIPs) program's Controlling High Blood Pressure measure. Additionally, we recommend that the ACC guidelines for pharmacologic treatment of patients with Clinical ASCVD or an estimated 10-year CVD risk of 10% be followed. For patients without Clinical ASCVD or an estimated 10-year CVD risk of 10%, the ACC recommended the threshold for the use of BP-lowering medication remain at 140/90. This alignment allows CommonSpirit Health to focus improvement efforts on effective hypertension management, while enabling comparison and benchmarking of division and enterprise-wide performance against clinicians, groups and third-party intermediaries participating in the CMS-MIPS program (approximately 420,000 providers).
- A newly diagnosed hypertension patient seen in June most likely will not be brought under "good control" prior to the end of the performance period.

  Will this negatively impact our ability to achieve the performance goals?
- While the CMS-MIPs HTN population only includes those patients with a HTN diagnosis in the first 6 months of the measurement period, the national hypertension data cohort includes all patients with an HTN diagnosis or active problem seen during the entire performance period. When evaluating the use of this approach, the national clinical analytics team conducted an in-depth impact analysis and found no statistically significant difference in percentage of hypertension patients within good control.
- Why isn't my division's data included in the CommonSpirit Health National Quality Measure Report?
- The National Quality Measure Report includes data elements abstracted from electronic health records of ambulatory patients seen by providers who are either employed or contracted within clinics that are affiliated with CommonSpirit Health and that utilize an owned instance of Cerner, Epic or Allscripts EHR. At the start of FY2019, data from these entities that use a CommonSpirit Health instance of Cerner, Epic or Allscripts electronic health record system (EHR) underwent a thorough validation process.

By using this validated data to populate the inaugural FY2020 National Quality Measure Report, we are able to produce an accurate, reliable snapshot of measure performance. Over the next year, our Clinical Analytics and Business Intelligence teams will be working together to expand our reporting capability to include additional divisions and EHR systems, and to the extent possible Clinically Integrated Networks and other affiliated organizations. While this year's measurement and data extraction processes will include only employed or contracted providers as above, our goal is to communicate and align efforts for controlling blood pressure across all of CommonSpirit Health.

- What is the expectation for divisions that do not have data in the CommonSpirit Health National Quality Measure Report?
- Although not all divisions will be able to compare their measure performance within the National Quality Measure report, control of hypertension is a national initiative.

  All divisions will be expected to monitor ongoing performance through use of locally produced or claims-based reporting systems, participate in national improvement activities, deploy recommended strategies and monitor effectiveness of improvement initiatives.
- What is the source of the HTN measure data?
- A The measurement data is aggregated from discrete fields within the electronic medical record as well as coded, or claimsbased information.

- How will performance data be reported year-to-date or rolling 12 months?
- A Data will be reported year-to-date, beginning Oct. 1, 2019.
- What is the Measurement Period for the FY20 goal?
- Performance in this goal will be evaluated on patients who are included in the denominator population for a CommonSpirit Health clinic between Oct. 1, 2019 and June 30, 2020.
- What is the difference between percentages and percentile ranking?
- A percent specifies how much of one quantity is made up by another quantity, and is always calculated in relation to 100. For purposes of the Hypertension Measure, the percentage is calculated via the following formula:

Number of patients whose most recent blood pressure during the measurement period is adequately controlled (systolic blood pressure <140 mmHg and diastolic blood pressure <90 mmHg)

divided by

X 100

Number of patients 18-85 years old who had a diagnosis or active problem of essential hypertension and an encounter during the measurement period

Percentile is a value at or below which a certain percentage of the distribution lies—a measure that indicates the value below which a given percentage of observations in a group of observations fall. For purposes of the Hypertension Measure, percentile ranking will be calculated using the 2018 CMS-MIPs Benchmark Results, which ranks performance of clinicians, groups and third-party intermediaries participating in the CMS-MIPS program (approximately 420,000 providers).

- What encounter types are included in the denominator data?
- A Outpatient office visits for primary care providers (PCPs) and specialists during the measurement period are included.
- Since the most recent BP is used for compliance, will the previously reported monthly data results change if the patient is seen in a more recent visit?
- A No, each month will include those patients with an active diagnosis of HTN (coded or on their problem list) who've had an office visit encounter and their corresponding BP.
- Is this only a PCP measure or will BP recorded in a specialist visit satisfy the measure, if it is the most recent visit?
- The most recent BP in the EHR related to an office visit will be used to determine good control.
- Are emergency or urgent care visits included?
- A No, only office visits are included.

- Is this a cumulative report as the measurement period progresses?

  For example, do December results also include those HTN patients seen in October and November?
- Yes, the rate would be cumulative, showing "In Control/Out of Control" status for each patient landed in the denominator during the yearly measurement period, and using the MOST RECENT BP result to determine numerator status. (Patients in prior months would be included, because it's cumulative, but each patient is only counted once.)
- If more than one BP is taken on the most recent visit, which BP is used?
- A The last recorded BP for the most recent visit is used.
- What is the baseline measurement period?
- October 2018-June 2019 is the baseline measurement period. This mirrors the measurement period of October 2019-June 2020, to capture any seasonal blood pressure changes.



# **Key Strategies for Success**

# Establish Hypertension Improvement as a Practice Priority

Designate a Hypertension Management
Champion: A designated clinician or other
member of the healthcare team oversees
hypertension improvement activities within one or
multiple clinics

# 2 Ensure Process Exists to Support Accurate Blood Pressure Measurement

- Establish a process to evaluate environment and equipment availability for accurate blood pressure measurement
- Establish a process to train and evaluate direct care staff on accurate BP measurement and recording

# 3 Support Patients in Self-Management of Hypertension

- Establish a process to train and evaluate patients on self-measured blood pressure technique
- Establish a process to support hypertension patients in adopting healthy lifestyle changes
- Establish a process for supporting patients in medication adherence

# Optimize HTN Management at Encounter Closing

 Establish a clinic workflow or process to flag hypertension patients and schedule follow-up visits (according to evidence-based guidelines) at encounter closing

#### References

1. Kirkland, E. et.al. Trends in Healthcare Expenditures Among US Adults With Hypertension: National Estimates, 2003–2014, J Am Heart Assoc. 2018. AHA 2018 Health Expenditures for Hypertension

2. Chobanian et al. The Seven the Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, The JNC 7 Report. JAMA. May 2003, Vol 289. Pg. 2560-72.

# Hypertension Management Gap Analysis Tool

## What is this tool?

The purpose of the gap analysis is to provide clinic improvement teams with a mechanism to:

- Compare the evidence-based "must have" improvement strategies with the processes currently in place within the clinic.
- Determine the "gaps" between current clinic practices and identified best practices.
- Provide a structured approach to documenting action plans to address identified "gaps".
- Provide a reference of available resources to support improvement efforts.

#### Who should use this tool?

The Hypertension Management Champion or designee will facilitate completion of the gap analysis with participation from providers and clinic team members. Clinics should establish improvement teams or workgroups to develop action plans to address identified gaps and successfully deploy improvement strategies.

## How can the tool help you?

Upon completion of the gap analysis, providers and clinic team members will have:

• An understanding of the differences between current clinic practices and evidence-based, best practices related to hypertension

- An assessment of the barriers that need to be addressed before successful implementation of best practices.
- An awareness of available resources to support improvement efforts.

## **Instructions**

- Please review each of the improvement strategy elements in Column 2. Answer Yes or No questions in Column 3 by checking the appropriate box.
- 2. If the improvement strategy is currently not in place, or associated elements are not addressed by current processes within your clinic, provide a brief description of action plan and estimated implementation date in Column 4.

Gap Analysis tools must be completed by SEPTEMBER 30, 2019. Onsite assistance with this evaluation or improvement efforts may be requested by contacting national team members above.

Completed gap analysis tools may be requested by Division and National quality and operational leaders throughout the year based on clinic Hypertension Measure performance data.



# **Hypertension Management Gap Analysis**

Key Concept	Improvement Strategy	Assessment	Action Plan/ Comments	Available Resources
Designated Hypertension Management Champion	A designated clinician or other member of the healthcare team oversees hypertension improvement activities within one or multiple clinics	YES NO (If no, document action plan and move to next section)		CommonSpirit Health Hypertension Management Champion Role Description
	The HTN Mgt. Champion collaborates with providers and clinic managers to facilitate completion of this gap analysis of current hypertension management practices within assigned clinic(s) and:	YES NO		
	Facilitates clinic approach to support adherence to hypertension management improvement strategies to address gap analysis findings.  (For example, establish an improvement team or work group to focus on these efforts.)	YES NO		
	Mentors providers, clinic staff, improvement teams to effectively apply improvement methods and tools	YES NO		
	Facilitates process for periodic review, monitoring and sharing of performance outcome data reports with providers and staff	YES NO		
	Celebrate key milestone achievements	YES NO		

Key Concept	Improvement Strategy	Assessment	Action Plan/ Comments	Available Resources
Ensure Process Exists to Support Accurate Blood Pressure Measurement	A process exists to evaluate environment and equipment availability for accurate blood pressure measurement  • Environmental and equipment audit has been conducted in all areas in which blood pressure measurement occurs and includes evaluation of the	YES NO (If no, document action plan and move to next section) YES NO		Target: BP Measure Accurately (pre-assessment tool) https://targetbp.org/tools_ downloads/measure-accurate- ly-pre-assessment/  Lists of approved monitors: http://dableducational.org/
	following elements:	YES NO		sphygmomanometers/
	Four cuff sizes available per room/patient (small, medium, large, extra large)	YES NO		
	Properly validated, calibrated     BP measurement devices are in     good working condition	YES NO		
	If wall-mounted, sphygmomano- meter is optimally placed, preventing staff and equipment from excessive bending or stretching	YES NO		
	<ul> <li>Patient chair/seating surface is standard 17 inches in height and provides for back support</li> </ul>	YES NO		
	Patient chair/seating surface is accessible on both sides for obtaining measurement in either the patient's right or left arm	YES NO		
	Support surface to allow patient to rest arm at heart level is available	YES NO		

Sources: 'Hypertension Guideline Toolkit for Healthcare Providers, American Heart Association; 2017. 2Centers for Disease Control and Prevention. Hypertension Control Change Package for Clinicians. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services; 2015.

ey Concept   Improvement Strategy	Assessment	Action Plan/ Comments	Available Resources
Process exists to train and evaluate direct care staff on accurate BP measurement and recording  • An education program is provided to direct care staff and addresses importance of blood pressure control for hypertension and adherence to proper BP measurement technique  • A process exists to validate competency of direct care staff on accurate BP measurement and documentation and includes the following elements:  • Assessment of equipment availability  • Patient preparation and positioning • Appropriate cuff size selection and placement  • BP measurement procedure  • Required repeat BP measurement for first visits and elevated readings:  • Recording of SBP and DBP readings within discreet field per EMR (not within narrative note)  • Provide patient the BP readings verbally and in writing  • Notification of provider for repeat BP levels greater than 140/90  • Staff training and competency	YES NO YES NO	Comments	CommonSpirit Health Performing Accurate Blood Pressure Measurement (staff education PowerPoint)  AHA Steps for Accurate BP Measurement (staff education poster) https://www.heart.org/-/media/ files/health-topics/high-blood- pressure/tylenol-hbp/aha_ toolkit_poster_final_102618  Measure Up, Measure Down Quarterly Blood Pressure Audit Tool http://www.measureuppressuredown. com/HCProf/Find/Toolkit/ PlanklTool10.pdf

Key Concept	Improvement Strategy	Assessment	Action Plan/ Comments	Available Resources
Support Patients in Self- Management of Hypertension	Process exists to train and evaluate patients and family members on self-measured blood pressure technique  • Patient training program/process includes the following:	YES NO (If no, document action plan and move to next section) YES NO		AHA What is High Blood Pressure (patient education brochure) https://www.heart.org/-/media/ data-import/downloadables/pe- abh-what-is-high-blood-pressure- ucm_300310.pdf
	Rationale for home blood pressure monitoring	YES NO		CommonSpirit Health
	How to select a home     pressure monitor	YES NO		Self-measured blood pressure technique: How to take your own blood pressure (patient education
	How to properly use a home blood pressure monitor: timing, preparation, positioning, multiple readings	YES NO		brochure – adapted from AMA and John Hopkins )
	Blood pressure readings and what they mean	YES NO		Target: BP SMBP Patient Training Checklist (stafftraining material) https://targetbp.org/tools_
	Recording results	YES NO		downloads/patient-training-
	Criteria for seeking medical treatment	YES NO		reference-guide/
	Staff and clinicians have been educated and expectations communicated regarding use of available tools and training programs.  AHA able http:    AHA   ABA   ABA	AHA My Blood Pressure Log (printable home BP tracking tool) https://www.heart.org/-/media/files/health-topics/high-blood-pressure/my-blood-pressure-log.		
	Process is in place for checking the accuracy of patients' home monitors and the patients' ability to take an accurate blood pressure at home	YES NO		
	Patients are provided with a blood pressure tracking tool	YES NO		

Key Concept	Improvement Strategy	Assessment	Action Plan/Comments	Available Resources
Support Patients in Self- Management of Hypertension	Process exists to support hypertension patients in adopting healthy lifestyle changes	YES NO (If no, document action plan and move to next section)		AHA Check. Change. Control Tracker (online BP tracking tool) https://www.ccctracker.com/
	Patients with hypertension are provided information to support lifestyle changes to reduce BP. Resources provided address the following:	YES NO		Your Guide to Lowering Blood Pressure (patient education guide) https://www.nhlbi.nih.gov/files/ docs/public/heart/hbp_low.pdf
	Weight loss for patients who are overweight or obese	YES NO		AHA What Can I Do to
	Heart-healthy diet (such as DASH)	YES NO		Improve my Blood Pressure
	Sodium restriction	YES NO		(patient education flyer) https://www.heart.org/-/media/
	Potassium supplementation (preferably in dietary modification)	YES NO		files/health-topics/high-blood- pressure/what-can-i-do-to-
	Increased physical activity with structured exercise program	YES NO		improve-my-blood-pressure- chart-ucm_486661.pdf
	Limitation of alcohol to 1 (women) or 2 (men) standard drinks per day	YES NO		
	Smoking cessation	YES NO		
	Staff and clinicians have been educated and expectations communicated regarding use of available tools to support patient lifestyle changes	YES NO		
	A list of community resources that could support the patient in the control of their blood pressure, is maintained and may include:	YES NO		
	Weight loss programs	YES NO		
	Places to walk and gyms	YES NO		
	Specialists such as nutritionists	YES NO		
	Social service needs such as transportation, meals, and assisting patient with accessing community resources	YES NO		

Sources: 'Hypertension Guideline Toolkit for Healthcare Providers, American Heart Association; 2017. <sup>2</sup>Centers for Disease Control and Prevention. Hypertension Control Change Package for Clinicians. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services; 2015.

Key Concept	Improvement Strategy	Assessment	Action Plan/Comments	Available Resources
Support Patients in Self-Management of Hypertension	Process exists for supporting patient in medication concordance (that they understand) and adherence (that they take drugs as directed)  • Patients with hypertension are provided information about:  • Consequences and potential side effects of medication and drug interactions  • Tips to support adherence, i.e. Integrate pill-taking into routine activities of daily living with support tools such as reminders and pillboxes packaging and	YES NO (If no, document action plan and move to next section)  YES NO  YES NO  YES NO		CommonSpirit Health AHA Barriers and Improvement Strategies in Antihypertensive Medication Adherence (staff/ provider guide retrieved from Hypertension Guideline Data Supplement pg 257)  AHA What is High Blood Pressure Medication (patient education brochure) https://www.heart. org/-/media/data-import/ downloadables/pe-abh-what-is- high-blood-pressure-medicine- ucm_300448.pdf
	other aids, refill process  • Staff and clinicians have been educated and expectations communicated regarding use of available tools to support medication adherence	YES NO		HA <i>BP Raisers</i> (patient education brochure) https://www.heart. org/-/media/files/health-topics/ high-blood-pressure/tylenol-hbp/ bp-raisers
Optimize HTN Management: En- counter Closing (e.g., checkout)	Clinic workflow supports process to flag hypertension patients and schedule follow-up visits (according to evidence- based guidelines) at encounter closing	YES NO		CommonSpirit Health Sample Discharge Workflow for HTN Improvement (clinic workflow flyer)

# **Staff Education Resources**

- CommonSpirit Health Performing Accurate Blood Pressure Measurement (staff education Power point)
- 2. Blood Pressure Measurement Staff Competency Validation Tool
- 3. Target: BP Measure Accurately (preassessment tool)
- 4. Steps for Accurate BP Measurement Poster
- Measure Up, Measure Down Quarterly Blood Pressure Audit Tool
- **6.** Target:BP SMBP Patient Training Checklist (staff training material)
- CommonSpirit Health AHA Barriers and Improvement Strategies in Antihypertensive Medication Adherence (staff/provider guide retrieved from hypertension guideline data supplement pg 257)

View Dignity Resources | View CHI Resources

# **Patient Education Resources**

- 1. AHA What is High Blood Pressure (patient education brochure)
- 2. CommonSpirit Health Self-measured blood pressure technique: How to take your own blood pressure (patient education brochure-adapted from AMA and John Hopkins)
- 3. AHA My Blood Pressure Log (printable home BP tracking tool)
- **4.** AHA Action Items to Help Lower Your Blood Pressure (patient education flyer)
- 5. Your Guide to Lowering Blood Pressure (patient education guide)
- 6. AHA What is High Blood Pressure Medication (patient education brochure)
- 7. AHA BP Raisers (patient education brochure)

View Dignity Resources | View CHI Resources



# Miscellaneous Supporting Resources



# **Hypertension Management Champion Role Description**

## **Role Summary**

In collaboration with the Physician Enterprise
Division Quality Leader and market leadership,
the Hypertension Management Champion
is authorized to serve as a liaison and coordinate
implementation of evidence-based practices
and strategies to improve care for patients
with hypertension within the clinic setting.
This individual may be a clinician or other
member of the healthcare team overseeing
hypertension improvement activities within
one or multiple clinics.

## **Desired Skills**

- Knowledgeable and enthusiastic about hypertension management and secondary cardiovascular risk reduction, with appropriate expertise and experience.
- Good communication skills and able to work well with others.
- 3. Willing/able to invest time in necessary activities including conducting educational presentations to providers and clinic staff, sharing performance outcome data and promoting cardiovascular risk reduction concepts.

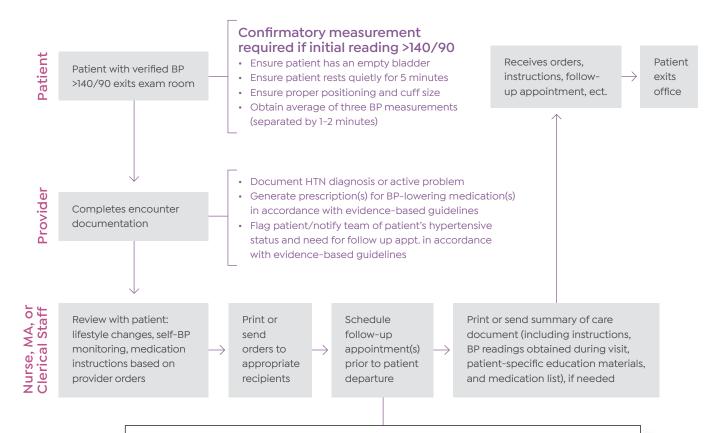
# Functions and Duties as Hypertension Management Champion

- Actively and enthusiastically promote hypertension management as a practice/ clinic improvement priority.
- 2. Collaborate with providers and clinic managers to facilitate a gap analysis of current hypertension management practices within assigned clinic(s) and promote, advocate and implement an improvement plan using evidence-based strategies to address identified gaps.
- 3. Provide input and leadership for implementation, monitoring, and evaluation of deployed improvement strategies.
- 4. Work collaboratively with providers and clinic staff to leverage and optimally utilize clinic infrastructure to:
  - Facilitate clinic approach to support adherence to hypertension management improvement strategies as directed by the Physician Enterprise Division Quality Leadership group and gap analysis findings.
     (For example, oversee establishment of an improvement team or work group to focus on these efforts.)
  - Mentor providers, clinic staff, and improvement teams to effectively apply improvement methods and tools.
  - Facilitate the process for periodic review, monitoring and sharing of performance outcome data reports.
  - Celebrate key milestone achievements.

Adapted from "Kaiser Permanente. Cardiovascular Physician Champion Role Description" included as Appendix A. Centers for Disease Control and Prevention. Hypertension Control Change Package for Clinicians. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services; 2015.

# CommonSpirit Health Sample Discharge Workflow for HTN Improvement

## Office Discharge: Hypertension (HTN) Patient



A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

New blood pressure targets and treatment recommendations: For years, hypertension was classified as a blood pressure (BP) reading of 140/90 mm Hg or higher, but the updated guideline classifies hypertension as a BP reading of 130/80 mm Hg or higher. The updated guideline also provides new treatment recommendations, which include lifestyle changes as well as BP-lowering medications, as shown in Table 1.

**TABLE 1. Classification of BP** 

BP Category	Systolic BP		Diastolic BP	Treatment or Follow-up	
Normal	<120 mm Hg	and	<80 mm Hg	Evaluate yearly; encourage healthy lifestyle changes to maintain normal BP	
Elevated	120-129 mm Hg	and	<80 mm Hg	Recommend healthy lifestyle changes and reassess in 3-6 months	
Hypertension: stage 1	130-139 mm Hg	or	80-89 mm Hg	Assess the 10-year risk for heart disease and stroke using the atherosclerotic cardiovascular disease (ASCVD) risk calculator	
				If risk is less than 10%, start with healthy lifestyle recommendations and reassess in 3-6 months	
				If risk is greater than 10% or the patient has known clinical cardiovascular disease (CVD), diabetes mellitus, or chronic kidney disease, recommend lifestyle changes and BP-lowering medication (1 medication); reassess in 1 month for effectiveness of medication therapy	
				<ul> <li>If goal is met after 1 month, reassess in 3-6 months</li> </ul>	
				If goal is not met after 1 month, consider different medication or titration	
				<ul> <li>Continue monthly follow-up until control is achieved</li> </ul>	
Hypertension: stage 2	≥140 mm Hg	or	≥90 mm Hg	Recommend healthy lifestyle changes and BP-lowering medication (2 medications of different classes); reassess in 1 month for effectiveness	
				If goal is met after 1 month, reassess in 3-6 months	
				If goal is not met after 1 month, consider different medications or titration	
				Continue monthly follow-up until control is achieved	

# Additional HTN Strategies and Resources for Consideration

Focus Area	Goal	Key Strategies for Consideration	Comments	Sources
Clinic Readiness	HTN Awareness	Measure, Act, Partner approach     CommonSpirit Health marketing tools, i.e. posters, brochures	Various tools for patients and providers- educational material, monitoring logs and posters including CMEs	Target:BP – AHA AMA webisite- https://targetbp.org/ blood-pressure-improvement- program/
Training of Care Providers	Engage Providers to ACTIVELY manage HTN	Address knowledge deficits to reduce treatment inertia     Focus on the use of a standardized protocols and other clinical management tools     HTN management, care of resistance HTN     Provider training regarding screening for White-Coat and Masked HTN     Focus on the use of a standardized protocols and other clinical management tool	Algorithms for detecting white-coat or masked HTN	https://www.cdc.gov/globalhealth/healthprotection/ncd/training/hypertension-management-training.html https://millionhearts.hhs.gov/files/HTN_Change_Package.pdf AHA Hypertension Guideline Toolkit- http://aha-clinical-review.ascendeventmedia.com/books/aha-high-blood-pressure-toolkit/  2017 AHA Journal taskforce on clinical practice guidelines for HTN- https://www.ahajournals.org/lookup/doi/10.1161/HYP.000000000000000065
Blood Pressure Monitoring Processes	Accessibility for BP Checks	<ul> <li>Ready Access to Free BP Monitoring</li> <li>Train ALL staff on BP assessment and promote free drop-in BP checks for pts</li> <li>Allow patients to check out BP monitors for 30 days to record their BP readings</li> </ul>	One clinic suggests hanging the BP cuff on the exam room door as visual cue for patient with elevated BP	Millionhearts.hhs.gov  AHA article: Attended and Unattended Automated Office Blood Pressure Measurements Have Better Agreement With Ambulatory Monitoring Than Conventional Office Readings (J Am Heart Assoc. 2018;7:e008994. DOI: 10.1161/ JAHA.118.008994.)
	Reduction of White Coat HTN	Create a BP station where pts can rest quietly for 5 min before BP or after elevated measurement.  Use of unattended automated BP machine vs. attended or manual to reduce White-Coat HTN		
	Patient Activation	Clinic workflow development for:  Regular patient communication of SMBP readings to providers for treatment and follow-up care as needed  A patient/provider "feedback loop" in which provider support and advice are customized based on patients' reported information		

Focus Area	Goal	Key Strategies for Consideration	Comments	Sources
	Provider Notification	Clinic workflow developed for:  Method for flagging patients with high BP measurement at intake  Flagging HTN pts with links to treatment protocols, pt education, follow up appts  Intervention by various health care providers (e.g., pharmacists, NPs, PAs, health educators)		
Patient/Family Education/ Activation	Increase Patient/Family Understanding of Disease Risk	Scripting for staff during check-in process about HTN implications; answer common questions; set up home BP monitor  Process for new patients to sign a "contract" to meet certain milestones. i.e., people who have chronic diseases agree to make at least 3 visits a year  Provide patients with written self-management plan at end of each visit  Encourage or provide support group listing  Patient education poster for exam rooms  Patient checklist materials	Pacific Family Medicine, OR	https://millionhearts.hhs.gov/files/HTN_Change_Package.pdf  ACC-CardioSmart infographics https://www.cardiosmart. org/~/media/Images/ Infographics/2017/Blood- Pressure.ashx  Nhlbi.nih.gov- https://www. nhlbi.nih.gov/health-topics/ all-publications-and-resources/ healthy-blood-pressure-healthy- hearts-small-steps-take
Medication Adherence	Reduce Barriers to Adherence	<ul> <li>Medication Adherence and tools: day of week pill boxes; mobile apps</li> <li>Scripting for motivational interviewing techniques</li> <li>Provide prescription instructions in 3-4 major points using culturally sensitive language</li> <li>Use written and verbal education in ALL encounters.</li> <li>Provide rewards for medication adherence: coupons, certificates</li> <li>Implement frequent follow ups (email reminders, phone calls, text msg) to endure adherence</li> <li>Prescribe meds included in patient insurance coverage</li> <li>Medication Refills</li> <li>Establish process for 90 day medication refills for stable patients</li> <li>Assign one person responsibility for managing prescription refills</li> </ul>	Clinic logo pill boxes	https://millionhearts.hhs.gov/files/HTN_Change_Package.pdf
Hypertension Registry	Identify HTN patients	Use outpatient visit diagnosis codes, pharmacy data, and hospitalization records  Validate the accuracy of the registry inclusion criteria through random chart reviews  Health coaches use registry for outreach  Evaluate on-going patient progress		https://millionhearts.hhs.gov/files/MH_HTNCC_Kaiser.pdf

Focus Area	Goal	Key Strategies for Consideration	Comments	Sources
Targeted Treatment Protocols	Reduce Barriers to Adherence	Use simple, evidence-based algorithms  Establish standard dose-drug specific treatment protocols that provide sufficient detail, specific medications and dosages, schedule for titration or additional medications if BP is uncontrolled  Support titration of meds by clinical team members via physician-approved protocol  Use of fewer tablets through combination therapy; i.e. single-pill combination medication, Calcium Channel blocker as first line treatment  Encourage use of algorithm for diagnosis, evaluation and treatment of resistant HTN  Adherence Strategies using a team based approach		WHO Evidence-based Treatment Protocols: https://apps.who.int/iris/ bitstream/handle/10665/260421/ WHO-NMH-NVI-18.2-eng. pdf;jsessionid=8D2E61A8CDDB- B808ABBF5152D2F88C90? sequence=1  MIllionhearts.hhs.gov AHA Hypertension Guideline Toolkit- http://aha-clinical- review.ascendeventmedia.com/ books/aha-high-blood-pressure- toolkit/ 2017 AHA Journal taskforce on clinical practice guidelines for HTN- https:// www.ahajournals.org/ lookup/doi/10.1161/ HYP.000000000000000065
EHR Optimization	Identification of HTN Patients Reduce Variation of Care	<ul> <li>Method for flagging patients with high BP measurement at intake</li> <li>Flagging HTN pts with links to treatment protocols, pt education, follow up appts</li> </ul>		

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