PHASE

Preventing Heart Attacks & Strokes Everyday

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PREVENTING HEART ATTACKS & STROKES EVERY DAY

Michael Rakotz, MD, FAHA, FAAFP
American Medical Association

Practical Considerations for Applying the New Hypertension Guidelines

Wireside Chat

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Webinar Housekeeping

1. Lines are muted.

2. Chat in questions or unmute your line by pressing *7 to ask a question (*6 to re-mute).

3. Webinar is being recorded and will be posted on the PHASE Support site. A link will be sent via email.

4. Please fill out our feedback survey at the end of the webinar

Today's Speakers

Alexis Wielunski

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Kaiser Permanente

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KP Community Benefit Perspective

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Jerry Osheroff, MD, FACP, FACMI
TMIT Consulting, LLC

What are the pragmatic considerations for managing hypertension *now*?

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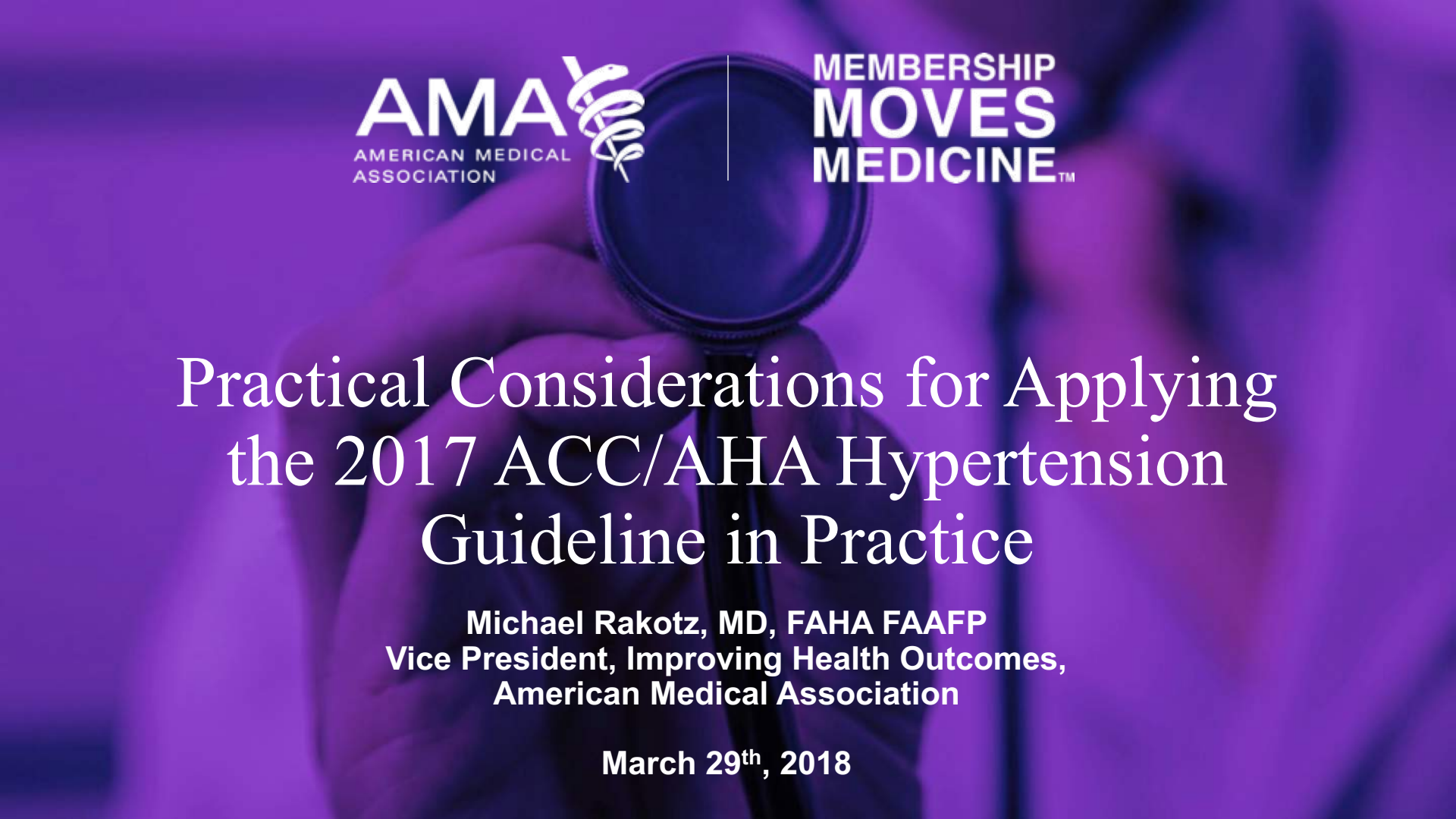


Practical Considerations for Applying the 2017 ACC/AHA Hypertension Guideline in Practice

Michael Rakotz, MD, FAHA FAAFP
Vice President, Improving Health Outcomes,
American Medical Association

March 29th, 2018

Disclosures

- None

Objectives

All PHASE grantees have ideas and considerations on applying new HTN guidelines in practice:

- List new categories of BP in adults
- Recall points of emphasis on obtaining accurate BP measurements
- List thresholds for both initiating treatment and targets for BP control
- Apply the expanded use of self-measured blood pressure (SMBP) monitoring
- Describe supportive strategies for improving BP control

New categories of BP in adults

New Categories of BP in Adults*

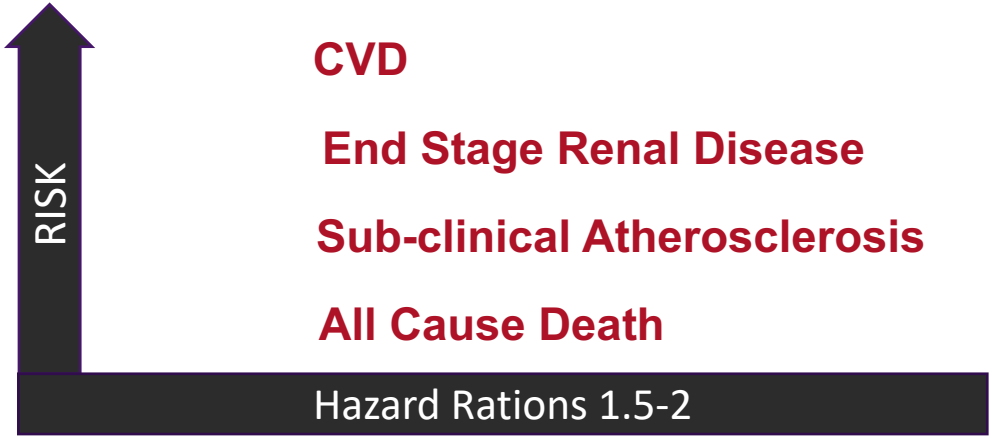
BP Category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120–129 mm Hg	and	<80 mm Hg
Stage 1 Hypertension	130–139 mm Hg	or	80–89 mm Hg
Stage 2 Hypertension	≥140 mm Hg	or	≥90 mm Hg

*Individuals with SBP and DBP in 2 categories should be designated to the higher BP category.
BP indicates blood pressure (based on an average of ≥2 careful readings obtained on ≥2 occasions, as detailed in DBP, diastolic blood pressure; and SBP systolic blood pressure.

Why did they make the change?

A gradient of progressively higher CVD risk with increasing BP, consistent across subgroups defined by sex and race/ethnicity

- Stage 1 hypertension 130-139/80-89
- Elevated BP: 120-129 to < 80
- Normal BP: <120/80



How does this impact the people you care for?

	SBP/DBP ≥130/80 mm Hg or Self-Reported Antihypertensive Medication†		SBP/DBP ≥140/90 mm Hg or Self-Reported Antihypertensive Medication‡	
Overall, crude	**46%**		**32%**	
	Men (n=4717)	Women (n=4906)	Men (n=4717)	Women (n=4906)
Overall, age-sex adjusted	**48%**	**43%**	**31%**	**32%**
Age group, y				
20–44	**30%**	**19%**	**11%**	**10%**
45–54	50%	44%	33%	27%
55–64	70%	63%	53%	52%
65–74	77%	75%	64%	63%
75+	79%	85%	71%	78%
Race-ethnicity §				
Non-Hispanic White	47%	41%	31%	30%
Non-Hispanic Black	59%	56%	42%	46%
Non-Hispanic Asian	45%	36%	29%	27%
Hispanic	44%	42%	27%	32%

Impact

What you need to understand about the new categories and Stage 1 HTN

1. The risk to your patients has NOT changed

2. The decision to adopt the new categories of BP will impact **current** performance measure scores which have not yet been updated for those with Stage 1 HTN (probably in your favor)

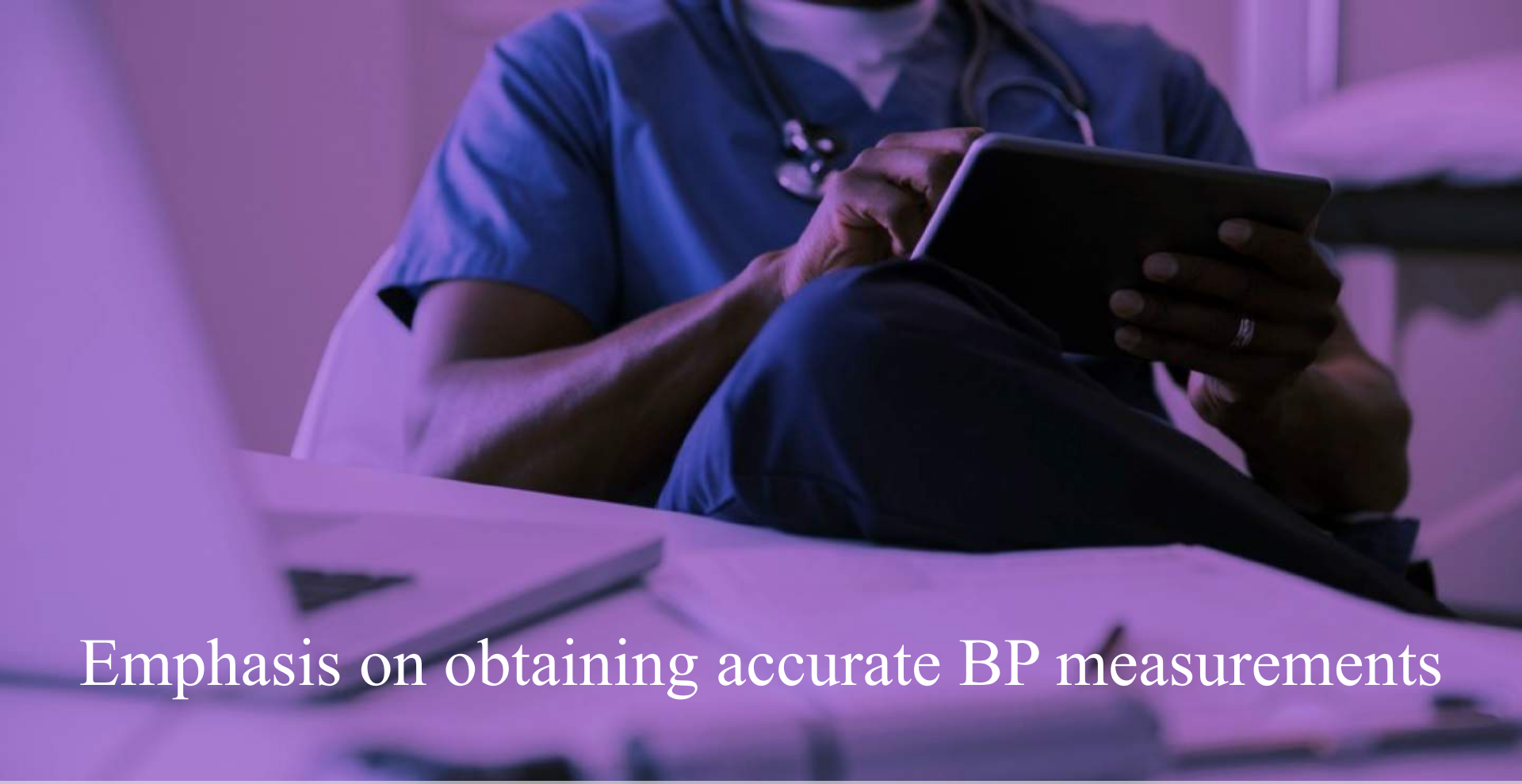
500/1000 controlled = 50 % Old definition JNC-7
650/1150 controlled = 57 % New definition

One Clinician

10,000/20,000 controlled = 50% Old definition JNC-7
13,000/23,000 controlled = 57% New definition

Ten Clinicians

3. It will, however, impact your patients (label / recognize and address risk)



Emphasis on obtaining accurate BP measurements

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Accurate BP Measurements in the Office

COR	LOE	Recommendation for Accurate Measurement of BP in the Office
I	C-EO	For diagnosis and management of high BP, proper methods are recommended for accurate measurement and documentation of BP.

Key Steps for Proper BP Measurements
Step 1: Properly prepare the patient.
Step 2: Use proper technique for BP measurements.
Step 3: Take the proper measurements needed for diagnosis and treatment of elevated BP/hypertension.
Step 4: Properly document accurate BP readings.
Step 5: Average the readings.
Step 6: Provide BP readings to patient.

NO CHANGE from JNC- 7

Properly Position the Patient

1. Have patient relax, sitting in chair (feet on floor, back supported) for >5 min
2. The patient should avoid caffeine, exercise, and smoking for ≥ 30 min prior
3. Ensure patient has emptied his/her bladder.
4. No talking during the rest period or during the measurement.
5. Remove all clothing covering the location of cuff placement.

Use proper technique for BP measurements

1. Use a BP measurement device that has been validated, and ensure that the device is calibrated periodically.

2. Support the patient's arm

3. Position the middle of the cuff on the patient's upper arm at the level of the right atrium (the midpoint of the sternum).

4. Use the correct cuff size, such that the bladder encircles 80% of the arm, and note cuff size is used

5. Either the stethoscope diaphragm or bell may be used

Take proper measurements needed for categorizing Pt. and document

1. At the first visit, record BP in both arms.
   Use the arm that gives the higher reading for subsequent readings.

2. Separate repeated measurements by 1–2 min.

3. For auscultatory determinations, use a palpated estimate of radial pulse obliteration pressure to estimate SBP. Inflate the cuff 20–30 mm Hg above this level for an auscultatory determination of the BP level.

4. Deflate the cuff pressure 2 mm Hg per second
   and listen for Korotkoff sounds.

5. Document readings

Average the readings and provide to patient

- Use an average of ≥2 readings obtained on ≥2 occasions to estimate the individual's level of BP.
- Provide patients the SBP/DBP readings both verbally and in writing.

What is a practical approach to measuring office BP?

- No compromise on proper positioning
- No compromise on using proper technique (validated device, arm support, cuff size and positioning, both arms first visit)

- 5 minute rest?
- Averaging ≥2 BPs on ≥ 2 occasions?

What is a practical approach to measuring office BP?

When ***screening*** patients for high blood pressure or control, obtain 1-2 accurate measurements and average them

- ☑ Use a validated, automated device to measure BP
- ☑ Use the correct cuff size on a bare arm
- ☑ Ensure patient is positioned correctly

If screening BP high, obtain ***confirmatory*** measurements:

- ☑ Ensure patient has an empty bladder
- ☑ Rest for 3-5 minutes
- ☑ Obtain the average of at least 2 additional BP measurements
- ☑ Confirm a new diagnosis of hypertension or BP not at goal if already diagnosed using out-of-office BP - 24-hour ambulatory monitoring (ABPM) or SMBP

New thresholds for initiating treatment and treatment targets

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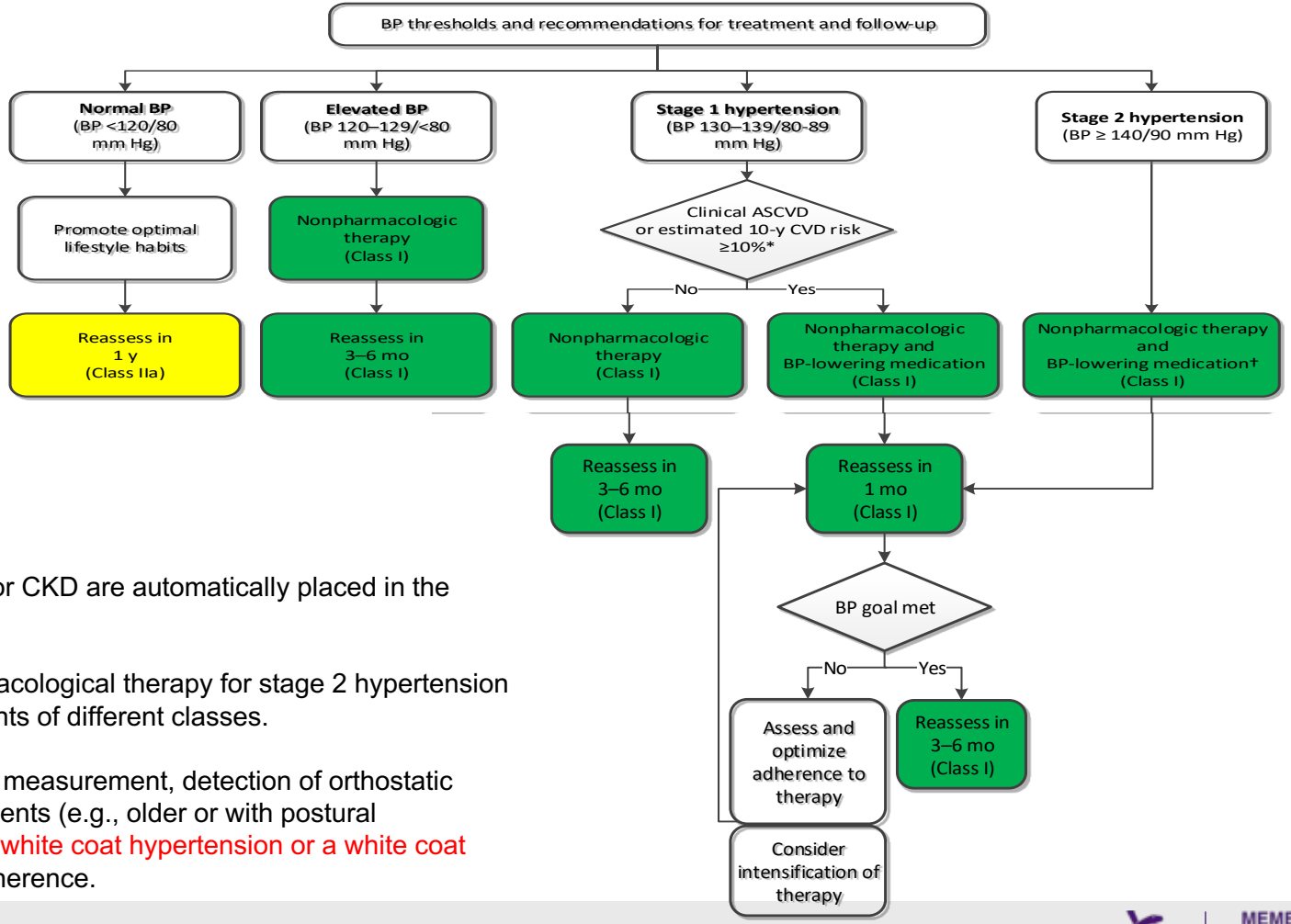
New thresholds for initiating treatment



Note that patients with DM or CKD are automatically placed in the high-risk category.

Consider initiation of pharmacological therapy for stage 2 hypertension with 2 antihypertensive agents of different classes.

Reassessment includes BP measurement, detection of orthostatic hypotension in selected patients (e.g., older or with postural symptoms), identification of white coat hypertension or a white coat effect, documentation of adherence.

New BP treatment targets

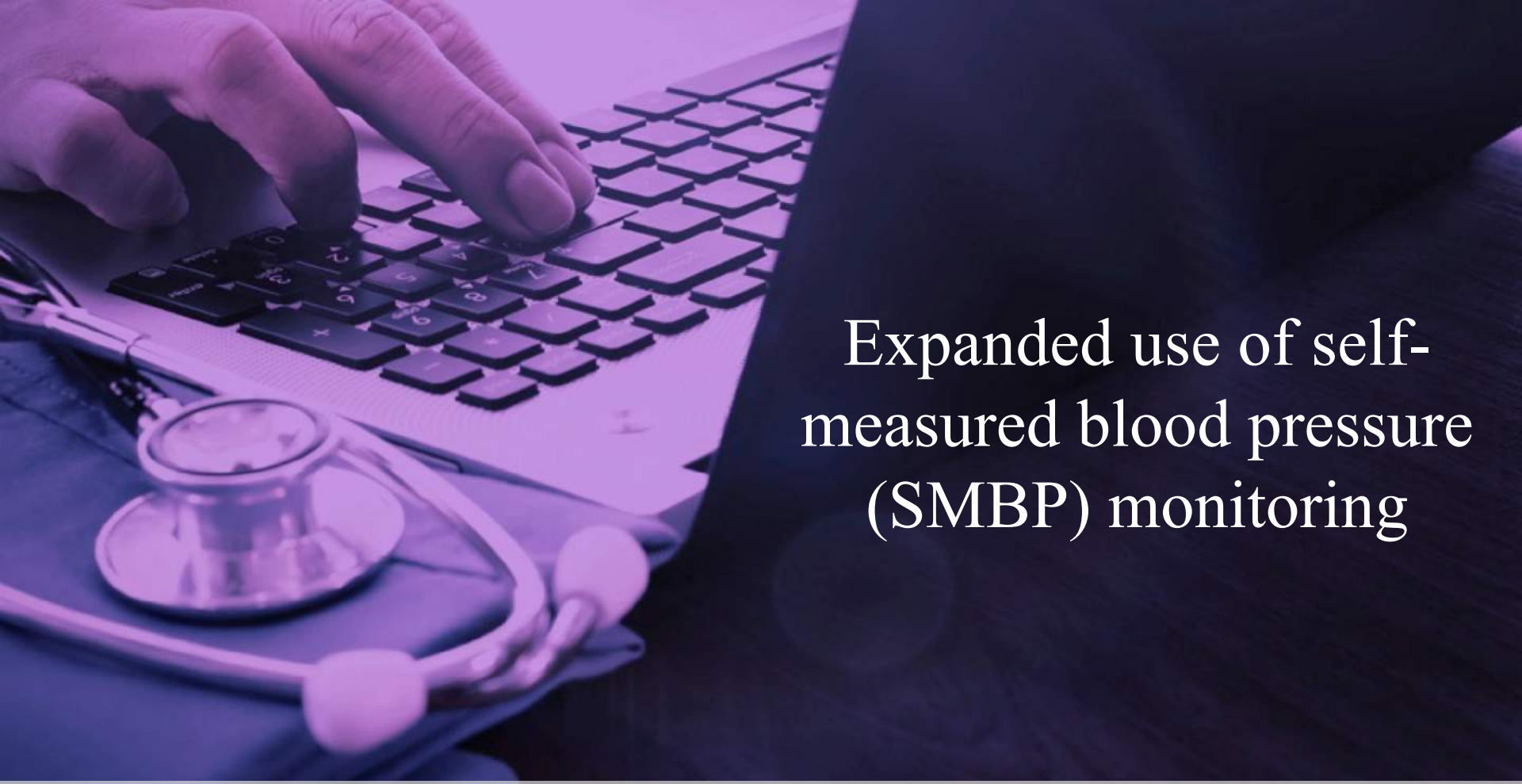
COR	LOE	Recommendations for BP Goal for Patients With Hypertension
I	SBP: B-R[SR]	For adults with confirmed hypertension and known CVD or 10-year ASCVD event risk of 10% or higher a BP **target of less than 130/80 mm Hg is recommended.**
	DBP: C-EO	
IIb	SBP: B-NR	For adults with confirmed hypertension, without additional markers of increased CVD risk, a BP target of less than 130/80 mm Hg **may be reasonable**.
	DBP: C-EO	

BP Thresholds for Initiating Pharmacological Therapy and BP Goal in Patients With Hypertension

Clinical Condition(s)	BP Threshold, mm Hg	BP Goal, mm Hg
General		
Clinical CVD or 10-year ASCVD risk ≥10%	≥130/80	<130/80
No clinical CVD and 10-year ASCVD risk <10%	≥140/90	<130/80
Older persons (≥65 years of age; noninstitutionalized, ambulatory, community-living adults)	≥130 (SBP)	<130 (SBP)
Specific comorbidities		
Diabetes mellitus	≥130/80	<130/80
Chronic kidney disease	≥130/80	<130/80
Heart failure	≥130/80	<130/80
Secondary stroke prevention	≥140/90	<130/80
Secondary stroke prevention (lacunar)	≥130/80	<130/80

Practical Considerations for BP Thresholds for Initiating Pharmacological Therapy and BP Goal in Patients With HTN

- Guideline recommendations do not take the place of clinical judgement
- Use shared decision making when initiating treatment
- For high risk patients (ASCVD 10 yr risk ≥ 10%) and those being treated for secondary prevention, initiating BP-lowering therapy at an AVERAGE of ≥ 130 mmHg or ≥ 80 mmHG should be considered
- For low risk patients (ASCVD 10 yr risk < 10%) initiating BP-lowering therapy at an AVERAGE of ≥ 140 mmHg or ≥ 90 mmHG should be considered
- For non-institutionalized ambulatory community dwelling adults age ≥ 65, a treatment SBP goal of < 130 mm Hg if recommended IF TOLERATED
- For adults age ≥ 65 with HTN and high comorbidity, you must use clinical judgement, patient preference, and a team-based approach to assess the risk/benefit of treatment goal



Expanded use of self-measured blood pressure (SMBP) monitoring

Out-of-Office BP Recommendations

- Out-of-office BP measurements are recommended to confirm the diagnosis of hypertension and for titration of BP-lowering medication, in conjunction with telehealth counseling or clinical interventions.

- Follow-up and monitoring after initiation of drug therapy for hypertension control should include systematic strategies to help improve BP, including use of SMBP, team-based care, and telehealth strategies.

Why did they change the recommendations?

1. Confirming high office readings (USPSTF 2015) to make the diagnosis of HTN
2. SMBP can differentiates between white coat and sustained HTN
3. SMBP can help identify patients with masked HTN
4. SMBP correlates better with cardiovascular outcomes than conventional office BPs
    - Target Organ Damage
    - Future cardiovascular events
    - Mortality
5. SMBP provides a reliable estimate of effectiveness of antihypertensive treatment
6. Allows for Assessment of BP control at different times across a 24 hour period

7. Allows for better treatment decisions to be made in a timely fashion

Sharman JE, Howes FS, Head GA, et al. Home blood pressure monitoring: Australian expert consensus statement. *Journal of Hypertension* 2015; 33: 1721-1728
Parati G, Stergiou GS, Asmar R, et al. European society of hypertension practice guidelines for home blood pressure monitoring. *J Hum Hypertenss* 2010; 779-785

How to use SMBP

Patient-training should occur under medical supervision including:

- Information regarding hypertension
- Selection of equipment
- Acknowledgement that individual BP readings may vary substantially.
- Interpretation of results (What should they do if a number is out of expected range)

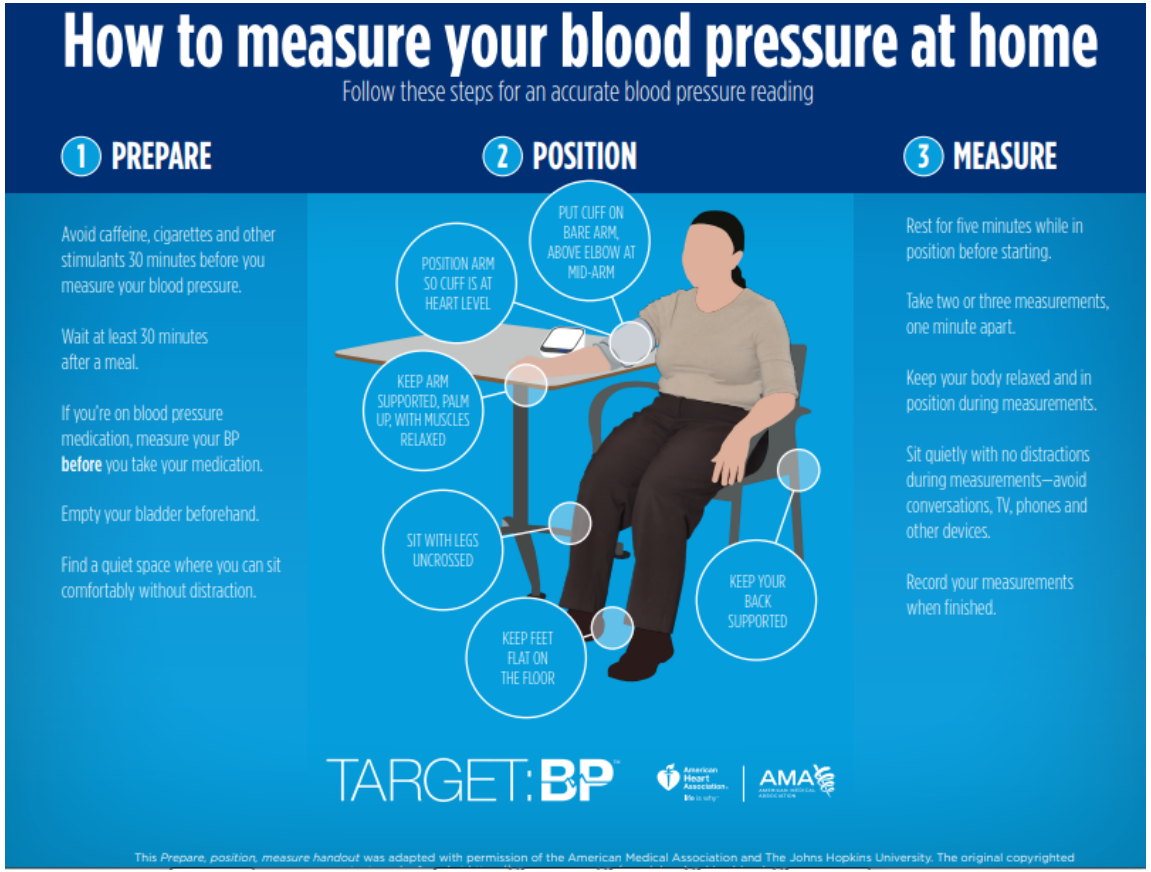
Devices:

- Verify use of automated validated devices.
- Monitors with provision for storage of readings in memory are preferred.
- Verify use of appropriate cuff size to fit the arm
- Verify that left/right inter-arm differences are insignificant. If significant, instruct patient to measure BPs in the arm with higher readings.

Instructions on HBPM procedures:

- **Remain still:**
  - Avoid smoking, caffeinated beverages, or exercise within 30 min before BP measurements.
  - Ensure ≥5 min of quiet rest before BP measurements.
- **Sit correctly:**
  - Sit with back straight and supported (on a straight-backed dining chair, for example, rather than a sofa).
  - Feet flat on the floor; legs uncrossed.
  - Arm supported on a flat surface (such as a table) with the upper arm at heart level.
- Bottom of the cuff placed directly above the antecubital fossa (bend of the elbow). **Take multiple readings:**
  - **Take at least 2 readings 1 min apart in AM before taking medications and in evening before supper. Optimally, measure and record BP daily. Ideally, obtain weekly BP readings beginning two weeks after a change in the treatment regimen and during the week prior to a clinic visit.**
- **Record all readings accurately**:
  - Monitors with built-in memory should be brought to all clinic appointments.
  - **BP should be based on an average from readings on ≥2 occasions for clinical decision making.**

Practical Considerations for using SMBP/HBPM



For out-of-office BP – SMBP is much more practical than ABPM

Diagnose patients more quickly and conveniently for patients

Save visits by having patients communicate results from home

Leverage available tools and resources to train patients to measure accurately and to monitor effectively

Clinic	HBPM
120/80	120/80
130/80	130/80
140/90	135/85

Supportive strategies for improving BP control

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Adherence Strategies for Treatment of Hypertension

- Treatment nonadherence is a major contributor to poor control of hypertension and a key barrier to reducing CVD deaths.
- In adults with HTN, dosing of antihypertensive medication once daily is beneficial to improve adherence
- Use of combination pills rather than free individual components can be useful to improve adherence to antihypertensive therapy
- Use of more objective methods (e.g., pill counts, data on medication refills) to assess adherence along with self-report methods is optimal
- Remain non-judgmental

Improving Quality of Care for Resource-Constrained Populations

- Use multidisciplinary team–based approaches including community health workers if possible
- Use of out-of-office BP monitoring (or no-cost BP control visits)
- Long-acting once-daily medications (generics preferred) can often be used to reduce complexity of the regimen and promote adherence
- 90-day medication fills and refills should be considered, especially once a stable regimen is achieved
- Use scored tablets and pill cutters to decrease the cost of medications

Structured, Team-Based Care Interventions for HTN Control

- A team-based care approach is recommended for adults with HTN
- Team-based care approach is patient centered multifaceted approach, with systems support for clinical decision making (i.e., treatment algorithms), collaboration, promotion of treatment adherence, SMBP, and patient self-management.
- Members of the team: the patient, the PCP, and other professionals, such as specialists, nurses, pharmacists, physician assistants, dietitians, social workers, and community health workers
- PCPs delegate routine matters to the team, thereby permitting more time to manage complex and critical patient care issues
- Team member roles should be clear to all team members and to patients and families.

Health Information Technology–Based Strategies to Promote Hypertension Control

- Use of the EHR and patient registries for identification of patients with undiagnosed or undertreated hypertension
- Use of the EHR and patient registries for guiding quality improvement efforts
- Telehealth strategies can be useful adjuncts to interventions shown to reduce BP for adults with hypertension

Performance Measures/Quality Improvement Strategies

- Use performance measures in combination with other QI strategies at patient-, provider-, and system-based levels to facilitate optimal hypertension control

- Use QI strategies at the health system, provider, and patient levels to improve identification and control of hypertension

Pre-submitted Questions/Issues Summary

- How do treatments for lowering high blood pressure change under the new guidelines?
- Upshot of how to apply new thresholds in practice?
- Increasing meds in geriatric patients – balancing risks (falls/hypotension) with evidence-based benefits.
- Addressing patient non-adherence.

Other Questions?

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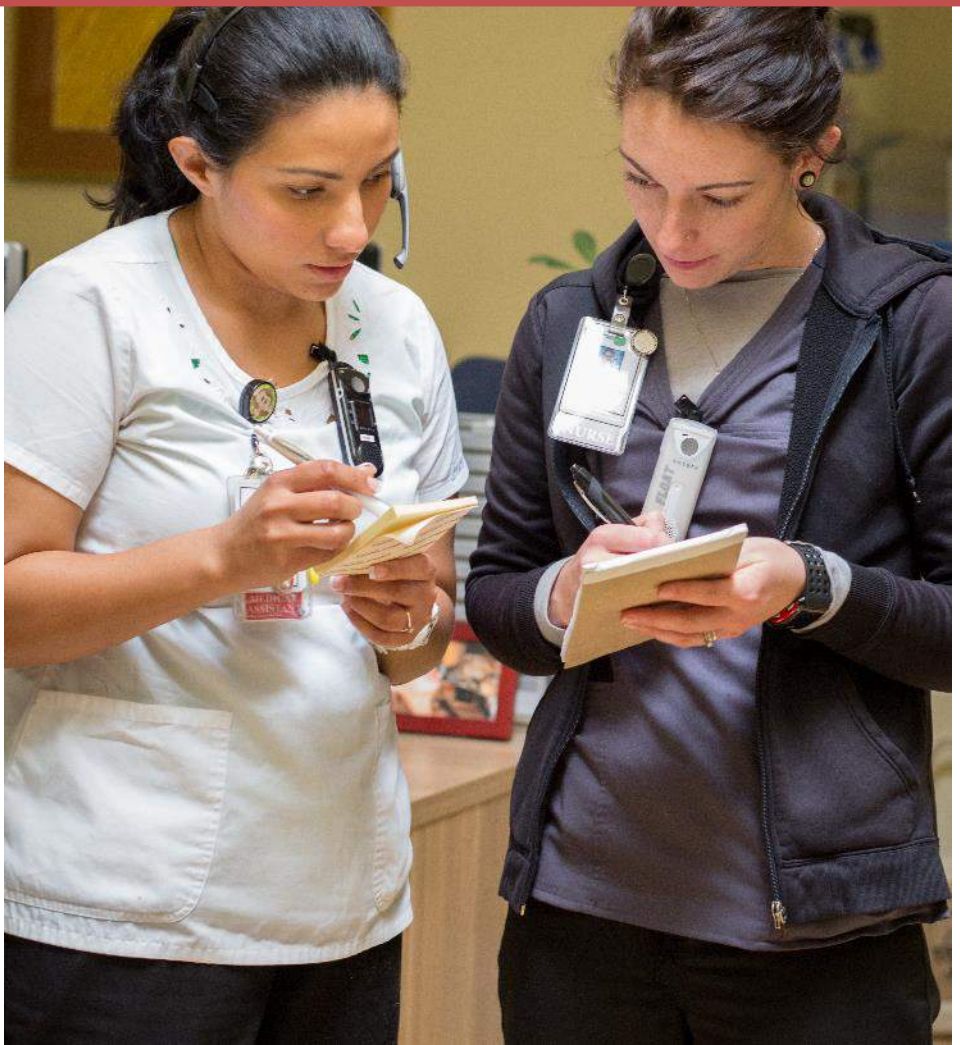
Webinar Series: Implementing Nurse-Run Hypertension Care



Part One – April 11, 12-1pm

The Case for Nurse-Led Care & Options for Implementation

Part Two – April 27, 12-1pm

Developing Protocols and Procedures

Part Three – May 16, 12-1pm

Nurse-Led Care in Action

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Save the date!
In-Person PHASE Convening

Tuesday, June 5 | DoubleTree, Berkeley Marina

BP Goals[1]

Population	Conventional	AOBP Avg[2]
18 - 59 yrs and/or DM, 18+, and /or CKD[3], 18+	**≤ 139 / 89 mm Hg**	**≤ 134 / 84 mm Hg**
≥ 60 yrs w/out DM or CKD	**≤ 149 / 89 mm Hg**	**≤ 144 / 84 mm Hg**

If BP above goal

Start ACEI+Diuretic

Lisinopril - HCTZ
20 - 25mg
½ → 1 → 2 tabs daily

See CAUTION/INFO: **verify contraception** & eGFR.
Titrate to BP goal.

Optional: Replace ACEI w/ ARB if ACEI intolerant

Losartan
25mg daily → 25mg twice daily → 50mg twice daily
Titrate to BP goal.

Add Calcium Channel Blocker

Amlodipine
2.5 → 5 → 10mg daily
Titrate to BP goal.

Replace HCTZ w/ Chlorthalidone

Chlorthalidone
25mg daily
Titrate to BP goal.

Add Spironolactone*

Spironolactone
12.5 → 25mg daily
*If on thiazide AND eGFR≥60 AND K<4.5

If Spironolactone eligibility criteria not met:

Atenolol[3]
25 → 50mg daily
Titrate to BP goal. **Maintain pulse of 55 or greater**

[1]BP algorithm applies if eGFR ≥ 30 and if LVEF ≥ 40%.
[2]Automated Office BP (AOBP) average is the average of three readings measured with the patient unobserved using an AOBP device.
[3] CKD: Microalbuminuria or [(age/2) + eGFR] < 85

Statin Goals

Atorvastatin 40-80 mg:
- Clinical ASCVD[5] Age < 75 + any LDL

Atorvastatin 10-20 mg:
- Clinical ASCVD Age ≥ 75 + any LDL
- DM: Age ≥ 40 + LDL 70-189

Clinical ASCVD[4]

Age <75 Any LDL	Age ≥75 Any LDL	DM: Age ≥ 40 LDL 70-189
Start Statin **Atorvastatin** 80mg daily. See CAUTION/INFO **Verify contraception**		**Start Statin** **Atorvastatin** 20 mg daily. See CAUTION/INFO **Verify contraception**

Optional: 10 yr CV risk ≥ 7.5%

If recommended dose of statin not tolerated, reduce to highest tolerated dose or switch to other statin (such as simvastatin or rosuvastatin)

Optional: LDL monitoring to assist with adherence assessment; consider lower statin dose if LDL < 40 x 2

[4] Beta Blockers, independent of their mild anti-hypertensive effect, are sometimes indicated for secondary cardio-protection

Adapted from KPNC CPG for: CAD, DM, Cholesterol, HTN, HF and Stroke
Complete guidelines can be found in the Clinical Library at http://cl.kp.org
Contact: Nora Kurose, MS, Senior Consultant, Regional Health Ed.
Design: Vince Rowell, Quality and Operations Support

A1c Goals

≤ 7.9%: ≥ 65 yrs or clinical factors[6]
≤ 6.9%: < 65 yrs w/o clinical factors

PHASE on a Page Rev. 25 (10/17)

Type 2 DM A1C ≥ 2% above goal

Yes → **Add Metformin + NPH insulin**

No → **Add Metformin[7]**

Start / Add NPH Insulin
10 units SQ at hs
↑ 2 units every 2 days until at target.

At goal

No → **Risk of Severe Hypoglycemia[8]**

Yes → **Monitor**

Start Metformin
500mg: ½ tablet bid → 1 tablet bid → 2 tablets bid

Contraindicated: eGFR <30 or HF NY class 3–4 or LFTs >3 x ULN
Start not recommended: If baseline eGFR < 45
Assess risk/ benefits: If eGFR falls < 45

If GFR 30–45, 1000mg = max.
Titrate every 1-2 weeks aiming for AM SMBG target
(≤ 6.9: 70–130; ≤ 7.9: 100–160)

Risk of Severe Hypoglycemia[8]

Yes → **Add Alternate agent[9]**

No → **Add Glipizide**

Add Glipizide
5mg: ½ tablet bid → 1 tablet bid → 2 tablets bid

Contraindicated: severe sulfa allergy

Titrate every two weeks until at target.

A1C ≥ 1% of goal?

Yes → **Add NPH Insulin**

No → **Add NPH Insulin or Alternate agent[9]**

Thiazoladinedione
- Oral
- Wt: Avg 1-3 kg gain
- Risk: CHF , Fx
- Formulary,
- generic co-pay

DPP-4 Inhibitor
- Oral
- Wt: Neutral
- Non-formulary; brand co-pay

GLP-1 R Agonist
- SQ Injection (Needs Endocrine approval)
- Wt: Avg 1-3 kg loss
- Risk: Nausea / vomiting
- Non-formulary; brand co-pay

SGLT2 Inhibitor
- Oral
- Wt: Avg 1-3 kg loss
- Risk: Genital yeast infections, DKA
- Non-formulary; brand co-pay

[5] Clinical Atherosclerotic Cardiovascular Disease (ASCVD), defined as: CAD, TIA/CVA, Symptomatic PAD.
[6]Individualize A1c goal based on risk of hypoglycemia, duration of DM, life expectancy, co-morbidities, vascular complications, member resources and support system.
[7]If intolerant to immediate release metformin, ***strongly*** consider sustained release metformin.
[8]**Severe Hypoglycemia** = Hypoglycemia resulting or likely to result in seizures, loss of consciousness, or needing help from others. **Mild to moderate hypoglycemia** = recognized signs and symptoms of neuro-glycopenia such as hunger or sweating that the patient can effectively self-treat.
[9]A1C above goal after 3 months despite non-insulin agents, ***strongly*** consider discontinuing ineffective medications and initiating insulin + metformin.

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Cardiovascular Risk Management Medications and Lab Chart Rev. 25 (08/17)

PHASE POPULATIONS

CAD Symptomatic **PAD**

CVA/TIA Ischemic

DM ASA: If 10 y CV risk > 10% ages 50-59 ASA recommended; if 10 y CV risk > 10% ages 60-69 consider ASA

PHASE MEDICATIONS & CAUTIONS

ASA

ASA	81mg daily

CAUTION/INFO If ASA intolerant: Clopidogrel : CAD, Sx PAD

ACEI

Lisinopril	10mg daily

CAUTION/INFO Verify effective contraception in women of childbearing potential: Use Chlorthalidone or HCTZ.
Use ACEI with caution: eGFR <30, K >5.5
ARB may be inappropriate : Hx of Angioedema, renal failure or hyperkalemia on ACEI.

STATIN

- Clinical ASCVD[3] Age < 75 + any LDL

Atorvastatin	40–80mg daily

- Clinical ASCVD Age ≥ 75 + any LDL
- DM: Age ≥ 40 + LDL 70-189

Atorvastatin *OR*	10-20mg daily
Simvastatin	20-40mg daily

CAUTION/INFO Verify effective contraception in women of childbearing potential.

BETA BLOCKER – FOR CAD/Sx PAD

Atenolol	25mg daily

CAUTION / INFO Use with caution: HR <55, asthma, hypotension.

BP	Preferred Dosage Forms	Max. Rec. Dose	Optimal Titration Interval	Baseline Labs	Titration
ACE Inhibitor - Diuretic Lisinopril - HCTZ (Prinzide®) F	Tab 20 / 25mg	40 / 50mg daily	2 weeks	K+ and SCr. < 6 months (Na+ optional)	K+ and SCr. 1 week after initiation or dosage change (Na+ optional)
Thiazide Diuretics HCTZ (Hydrodiuril®, Esidrix®) F	Tab 25mg	HCTZ 50mg daily	2 weeks	K+ and SCr. < 6 months (Na+ optional)	K+ and SCr 1 week after initiation or dosage change (Na+ optional)
Chlorthalidone (Hygroton®) F	Tab 25mg	25mg daily	2 weeks	K+ and SCr. < 6 months (Na+ optional)	K+, SCr 1 week after initiation or dosage change (Na+ optional)
ACE Inhibitor Lisinopril (Prinivil®) F	Tab 5, 10, 20mg	40mg daily	1 week	K+ and SCr. < 6 months	K+ and SCr 1 week after initiation. K+ 2 weeks after dosage change
ARB Losartan (Cozaar®) F	Tab 25, 50mg	100mg daily or 50mg BID	1 week	K+ and SCr. < 6 months	K+ and SCr 1 week after initiation. K+ 2 weeks after dosage change
Calcium Channel Blocker Amlodipine (Norvasc®) F	Tab 2.5, 5, 10mg	10mg daily	1 week	None	None
Potassium Sparing Diuretic Spironolactone (Aldactone®) F	Tab 25mg	25mg daily	1 week	K+, SCr. < 1 month	K+ and SCr 1 week after initiation & 2 weeks after dosage change
Beta 1 blocker Atenolol (Tenormin®) F	Tab 25, 50, 100mg	100mg daily	1 week	None	Maintain pulse ≥ 55

DM 2 (non-insulin agents)	Preferred Dosage Forms	Max. Rec. Dose	Optimal Titration Interval	Baseline Labs	Cautions / Contraindications
Biguanide Metformin (Glucophage®) F	Tab 500, 1000mg	1000mg BID	2 weeks	SCr. (CBC optional)	Contraindicated: eGFR <30 or HF NY class 3–4 or LFTs >3 x ULN; Not recommended: baseline eGFR < 45; Assess R/B: If eGFR falls < 45
Sulfonylurea Glipizide (Glucotrol®) F	Tab 2.5, 5, 10mg	20mg BID ac	2 weeks	None	Contraindicated: severe sulfa allergy
Thiazoladinedione Pioglitazone (Actos®) F	Tab 15,30,45 mg	45 mg daily	2 months	ALT,(AlkP ,T bili optional)	Contraindicated: CHF stage III or IV
DPP-4 inhibitor Linagliptin (Tradjenta®) NF	Tab 5 mg	5 mg daily	N/A	None	N/A
SGLT2 inhibitor Empagliflozin (Jardiance®) NF	Tab 10, 25 mg	25 mg daily	2 weeks	SCr.	Contraindicated: eGFR <45
GLP-1 receptor agonist Exenatide ER inj (Bydureon®) NF	SQ Inj 2 mg	2 mg weekly	N/A	SCr.	Contraindicated: personal or FH Medullary thyroid CA or MEN2

Statins	Preferred Dosage Forms	Max. Rec. Dose	Optimal Titration Interval	Baseline Labs*	Titration
Antilipemics Atorvastatin (Lipitor®) F	Tab 40, 80mg	80mg daily hs	N/A	ALT, SCr	N/A
Simvastatin (Zocor®) F	Tab 20, 40mg	40mg daily hs	N/A	ALT, SCr	N/A

F: Formulary
NF: Non-formulary

*Do not routinely measure CK. Consider baseline CK if increased risk for adverse muscle events (such as personal or family history of statin intolerance or muscle disease, clinical presentation, or concomitant drug therapy that might increase the risk for myopathy).

Drug info site: http://pharmacy.kp.org