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voices elevate° all.

*Evidence-Based Care*  
**HYPERTENSION**

*Deep Dive*  
06.15.21

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Attendee:

Camila Silva (NACHC)  
Me

# Quality Center

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# THE NACHC MISSION

## America's Voice for Community Health Care

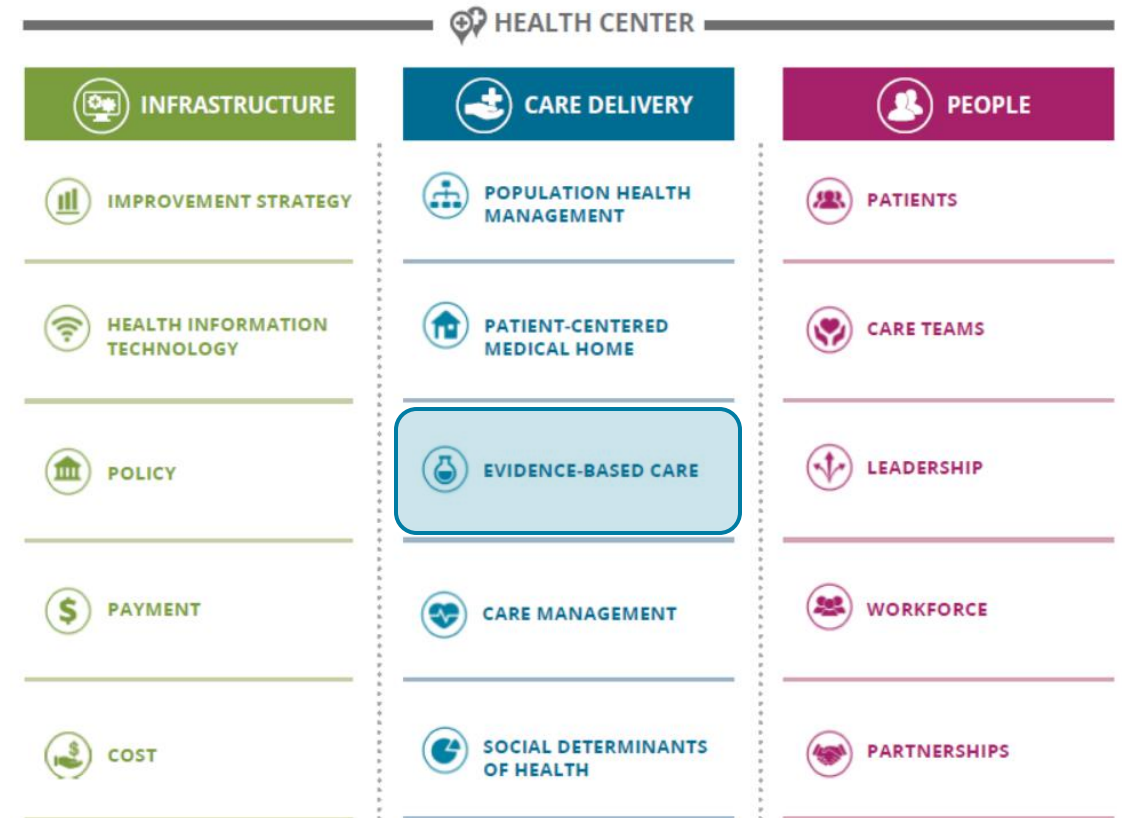
The National Association of Community Health Centers (NACHC) was founded in 1971 to promote efficient, high quality, comprehensive health care that is accessible, culturally and linguistically competent, community directed, and patient centered for all.



# Value Transformation Framework



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# EVIDENCE-BASED CARE HYPERTENSION



Make patient care decisions using a process that integrates clinical expertise and best-practice research with patient values and self-care motivators.

**Evidence-Based Care Action Guide:** [http://bit.ly/VTF\\_EvidenceBasedCare](http://bit.ly/VTF_EvidenceBasedCare)

**Hypertension Action Guide:** [http://bit.ly/VTF\\_EBC\\_Hypertension](http://bit.ly/VTF_EBC_Hypertension)



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Vice President of Health Outcomes



**Neha Sachdev, MD**  
Director of Health Systems Relationships



# Reducing therapeutic inertia to improve blood pressure control

Michael Rakotz, MD, FAAFP, FAHA  
Neha Sachdev, MD

# Objectives

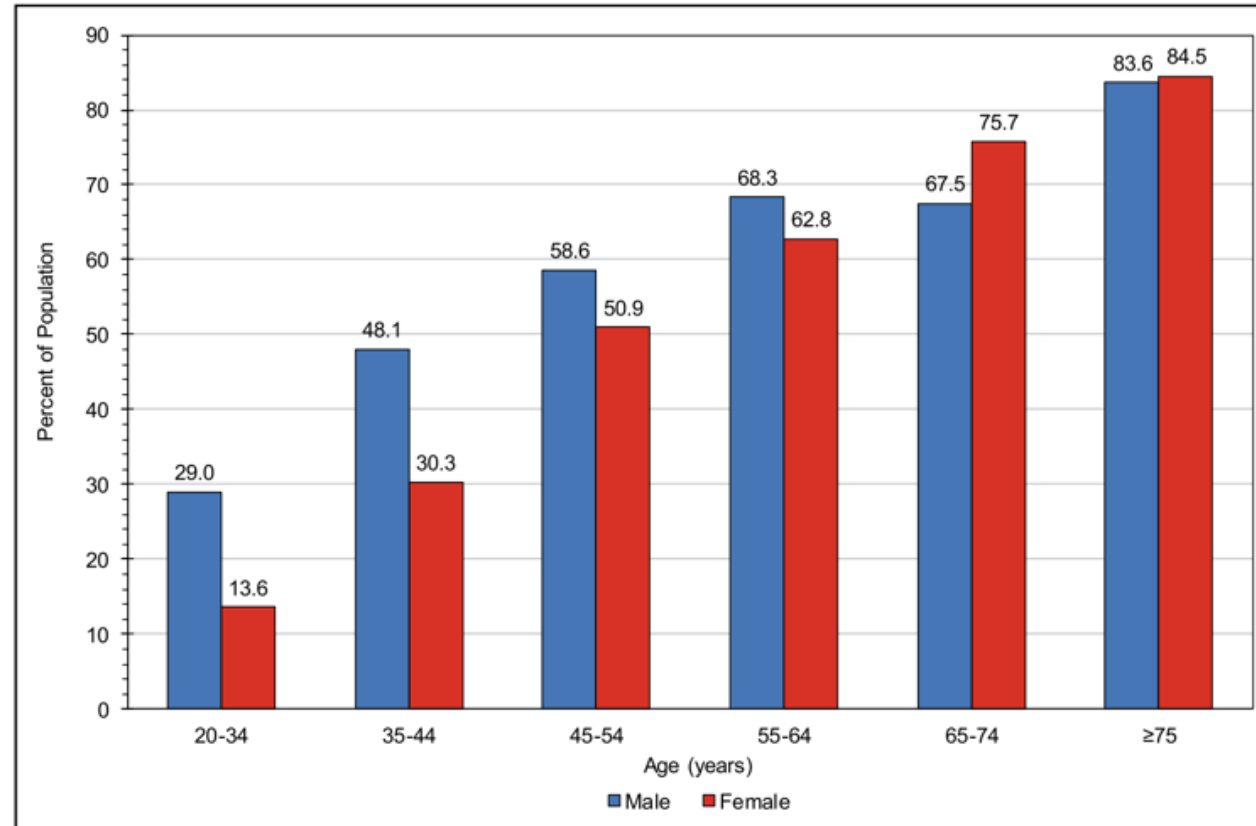
- Define therapeutic inertia and describe contributing factors
- Discuss impact of treatment intensification on blood pressure control and evidence-based approaches to intensifying treatment for patients with uncontrolled blood pressure
- Review strategies clinical care teams and health care organizations can implement to reduce therapeutic inertia and increase treatment intensification





# **Introduction: Current state of hypertension in the United States**

# Hypertension is common



**Chart 8-1. Prevalence of hypertension in US adults ≥20 years of age by sex and age (NHANES, 2015–2018).**

Hypertension is defined in terms of NHANES blood pressure measurements and health interviews. A person was considered to have hypertension if he or she had systolic blood pressure  $\geq 130$  mmHg or diastolic blood pressure  $\geq 80$  mmHg, if he or she said “yes” to taking antihypertensive medication, or if the person was told on 2 occasions that he or she had hypertension.

NHANES indicates National Health and Nutrition Examination Survey.

Source: Unpublished National Heart, Lung, and Blood Institute tabulation using NHANES, 2015 to 2018.<sup>5</sup>

Virani SS, Alonso A, Aparicio HJ, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, Chamberlain AM, Cheng S, Delling FN, Elkind MSV, Evenson KR, Ferguson JF, Gupta DK, Khan SS, Kissela BM, Knutson KL, Lee CD, Lewis TT, Liu J, Loop MS, Lutsey PL, Ma J, Mackey J, Martin SS, Matchar DB, Mussolino ME, Navaneethan SD, Perak AM, Roth GA, Samad Z, Satou GM, Schroeder EB, Shah SH, Shay CM, Stokes A, VanWagner LB, Wang N-Y, Tsao CW; on behalf of the American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2021 update: a report from the American Heart Association. *Circulation*. 2021;143:e254–e743. doi: 10.1161/CIR.0000000000000950

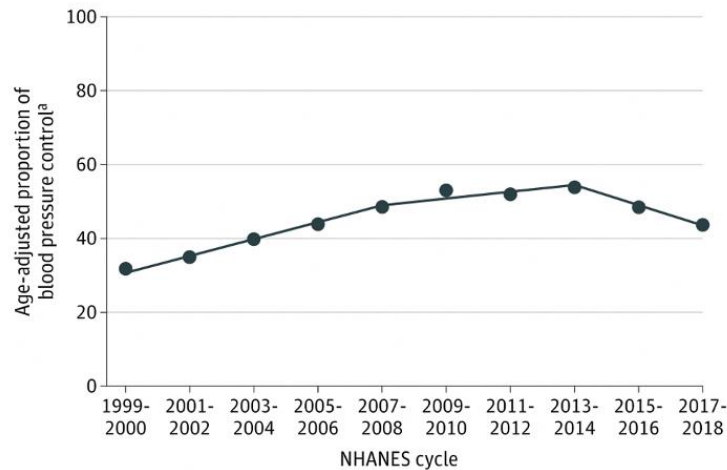
# Blood pressure control rates are falling



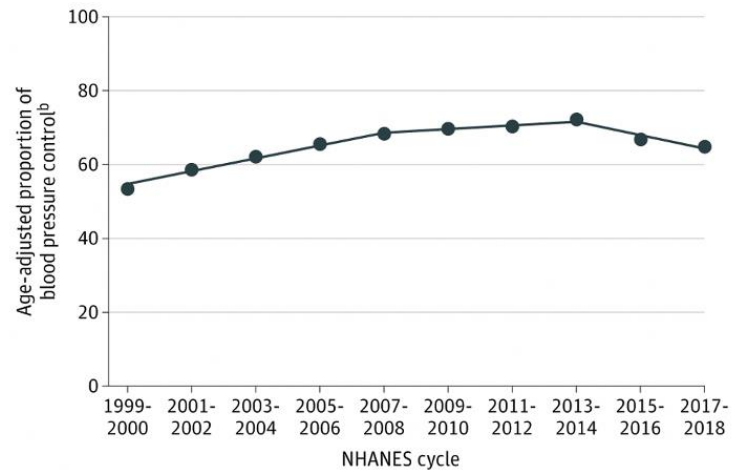
From: **Trends in Blood Pressure Control Among US Adults With Hypertension, 1999-2000 to 2017-2018**

JAMA. Published online September 09, 2020. doi:10.1001/jama.2020.14545

**A** Blood pressure control among all adults with hypertension



**B** Blood pressure control among adults taking antihypertensive medication



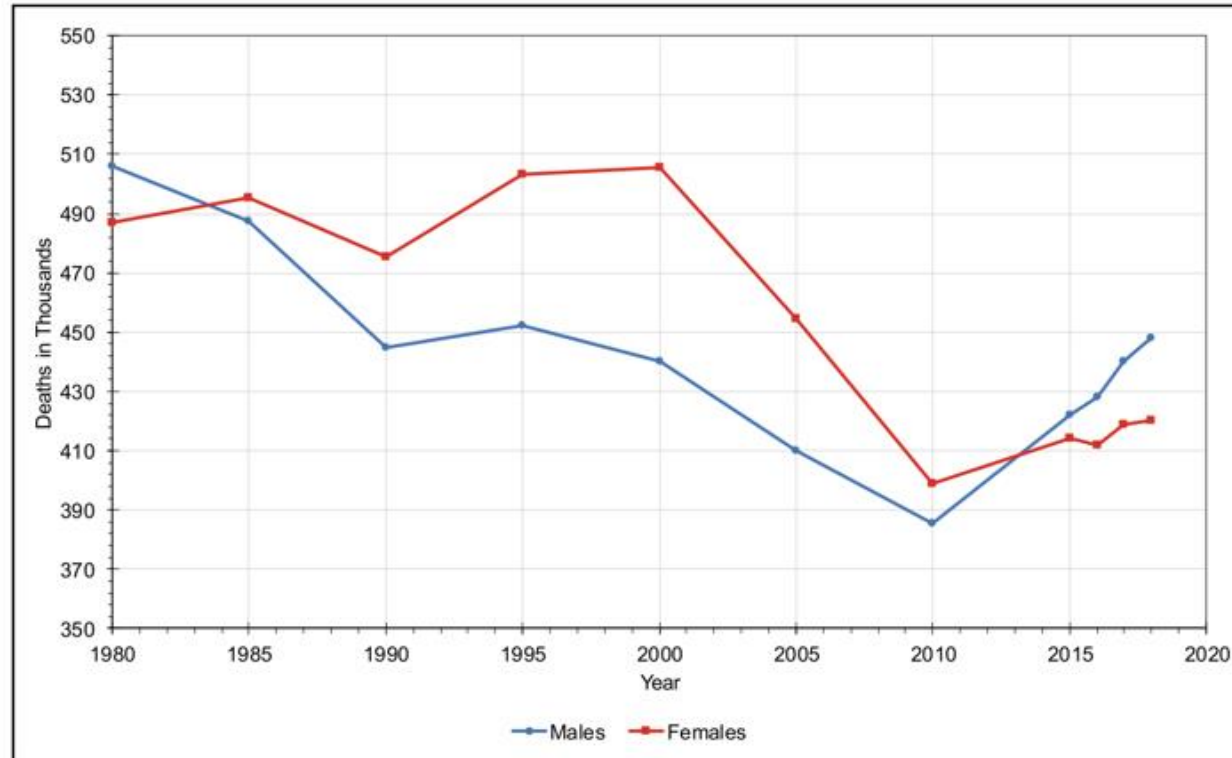
**Figure Legend:** Age-Adjusted Estimated Proportion of Adults With Hypertension and Controlled Blood Pressure

NHANES indicates National Health and Nutrition Examination Survey. The data markers represent the age-adjusted estimated proportion (the numbers and 95% CIs appear in Table 3 and eTable 1 in the Supplement). Hypertension was defined as systolic blood pressure (SBP) level of 140 mm Hg or higher, diastolic blood pressure (DBP) level of 90 mm Hg or higher, and antihypertensive medication use. Controlled blood pressure was defined as SBP level lower than 140 mm Hg and DBP level lower than 90 mm Hg. Treatment was defined by self-reported antihypertensive medication use. Among all adults with hypertension, blood pressure control from 1999-2000 through 2007-2008 yielded  $P < .001$  for trend; from 2007-2008 through 2013-2014,  $P = .14$  for trend; and from 2013-2014 through 2017-2018,  $P = .003$  for trend. Among adults taking antihypertensive medication, blood pressure control from 1999-2000 through 2007-2008 yielded  $P < .001$  for trend; from 2007-2008 through 2013-2014,  $P = .12$  for trend; and from 2013-2014 through 2017-2018,  $P = .305$  for trend. Age adjustment was performed using direct standardization with the standard being all adults across the entire period (1999-2018); the age categories used for standardization were 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%), and 75 years or older (17.7%). The line segments were generated using Joinpoint (National Cancer Institute).  
<sup>a</sup>Among all adults with hypertension.  
<sup>b</sup>Among adults who self-reported taking antihypertensive medication.

Date of download: 9/16/2020

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# Deaths from cardiovascular disease are rising



**Chart 14-12. Cardiovascular disease (CVD) mortality trends for US males and females, 1980 to 2018.**

CVD excludes congenital cardiovascular defects (*International Classification of Diseases, 10th Revision [ICD-10] codes I00–I99*). The overall comparability for CVD between the *International Classification of Diseases, 9th Revision (1979–1998)* and *ICD-10 (1999–2015)* is 0.9962. No comparability ratios were applied.

Source: Unpublished National Heart, Lung, and Blood Institute tabulation using National Vital Statistics System.<sup>36</sup>

Virani SS, Alonso A, Aparicio HJ, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, Chamberlain AM, Cheng S, Delling FN, Elkind MSV, Evenson KR, Ferguson JF, Gupta DK, Khan SS, Kissela BM, Knutson KL, Lee CD, Lewis TT, Liu J, Loop MS, Lutsey PL, Ma J, Mackey J, Martin SS, Matchar DB, Mussolino ME, Navaneethan SD, Perak AM, Roth GA, Samad Z, Satou GM, Schroeder EB, Shah SH, Shay CM, Stokes A, VanWagner LB, Wang N-Y, Tsao CW; on behalf of the American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2021 update: a report from the American Heart Association. *Circulation*. 2021;143:e254–e743. doi: 10.1161/CIR.0000000000000950

# Surgeon General's Call to Action to Control Hypertension

## Goals and Strategies to Improve Hypertension Control



U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Control Hypertension*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2020.

Source: Adapted from the U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Control Hypertension*. Washington, DC: U.S. Dept. of Health and Human Services, Office of the Surgeon General; 2020.



# Drivers of uncontrolled blood pressure

**Table 1.** Comparison of Key Hypertension Process Inputs Across Simulated Interventions. ([Table view](#))

Variable	Usual Care	
Probability of adhering to last antihypertensive medication at 1 year	57.0% <sup>1</sup> 7-22	Medication adherence
Probability of intensifying antihypertensive medication when: Adding/titrating first antihypertensive medication during simulation		
Systolic blood pressure ≥160 mm Hg or blood pressure ≥140/90 mm Hg with diabetes mellitus or chronic kidney disease	33.3% <sup>1</sup> 3-15	Medication intensification
Systolic blood pressure is uncontrolled but <160 mm Hg or blood pressure is uncontrolled but <140/90 mm Hg with diabetes mellitus or chronic kidney disease	20.8% <sup>1</sup> 1, 12	
Adding/titrating additional antihypertensive medications	13.0% <sup>1</sup> 6	Follow up time
Return visit interval when blood pressure uncontrolled	≈13.8 wk <sup>12</sup>	

The table shows the model inputs for the key hypertension management processes; best-observed values were preferentially derived from the highest reported mean or calculated using sample size or variance estimates as available. Perfect care values were based on the best input possible for each parameter.

Bellows BK, Ruiz-Negrón N, Bibbins-Domingo K, King JB, Pletcher MJ, Moran AE, Fontil V. Clinic-based strategies to reach United States million hearts 2022 blood pressure control goals. *Circ Cardiovasc Qual Outcomes*. 2019;12:e005624. DOI: 10.1161/CIRCUITCOMES.118.005624





# Impact of treatment intensification on blood pressure control

# Impact of treatment intensification on US blood pressure (BP) control rate

*Assuming BP control rate of 45.6%*

- Independently improving patient adherence to 100% would **increase BP control rates to 57.0%**
- Independently reducing the return visit interval to 1 week would **increase BP control rates to 67.6%**
- Independently increasing the probability that a provider intensified antihypertensive medication to  $\geq 62\%$  , regardless of prior antihypertensive intensification or baseline BP, would **achieve BP control rates of  $\geq 80\%$**



# Take home #1

***Intensifying treatment when indicated enhances survival***



# Defining and addressing therapeutic inertia

**Therapeutic inertia =**

**a lack of treatment intensification when  
a patient's blood pressure is high**

# Why does treatment intensification not occur?

- Overestimation by providers of the amount of care and aggressiveness of treatments provided
- Lack of training and education for providers on how to attain target BP levels
- Use of soft reasons to avoid intensification (“wait until next visit” approach)
- Financial pressures that could limit time for patient care
- Concern about cost to patients and adverse effects from medication
- Lack of familiarity with treatment guidelines or confusion from conflicting guidelines

Ogedegbe G. Barriers to Optimal Hypertension Control. *J Clin Hypertens*. 2008; 10(8): 644-646. doi:[10.1111/j.1751-7176.2008.08329.x](https://doi.org/10.1111/j.1751-7176.2008.08329.x)

# Addressing therapeutic inertia

*Use single pill combination medications*

*Use a treatment protocol*

*Follow up frequently until control is achieved*

# Using combination therapy

- Most patients with uncontrolled blood pressure will need more than 1 medication class to reach their BP goal
- Adding a BP medication at a ½ standard dose has ~80% of the BP lowering effect of a full dose

Whelton PK, Carey RM, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. *Hypertension*. 2018;71:e13–e115.

Law MR, Morris JK, Wald NJ. Use of blood pressure lowering drugs in the prevention of cardiovascular disease: meta-analysis of 147 randomised trials in the context of expectations from prospective epidemiological studies *BMJ*. 2009; 338:b1665.

## Take home #2

***When intensifying treatment for high blood pressure, adding a new medication class is more effective at reducing BP than increasing the dose of an existing medication***

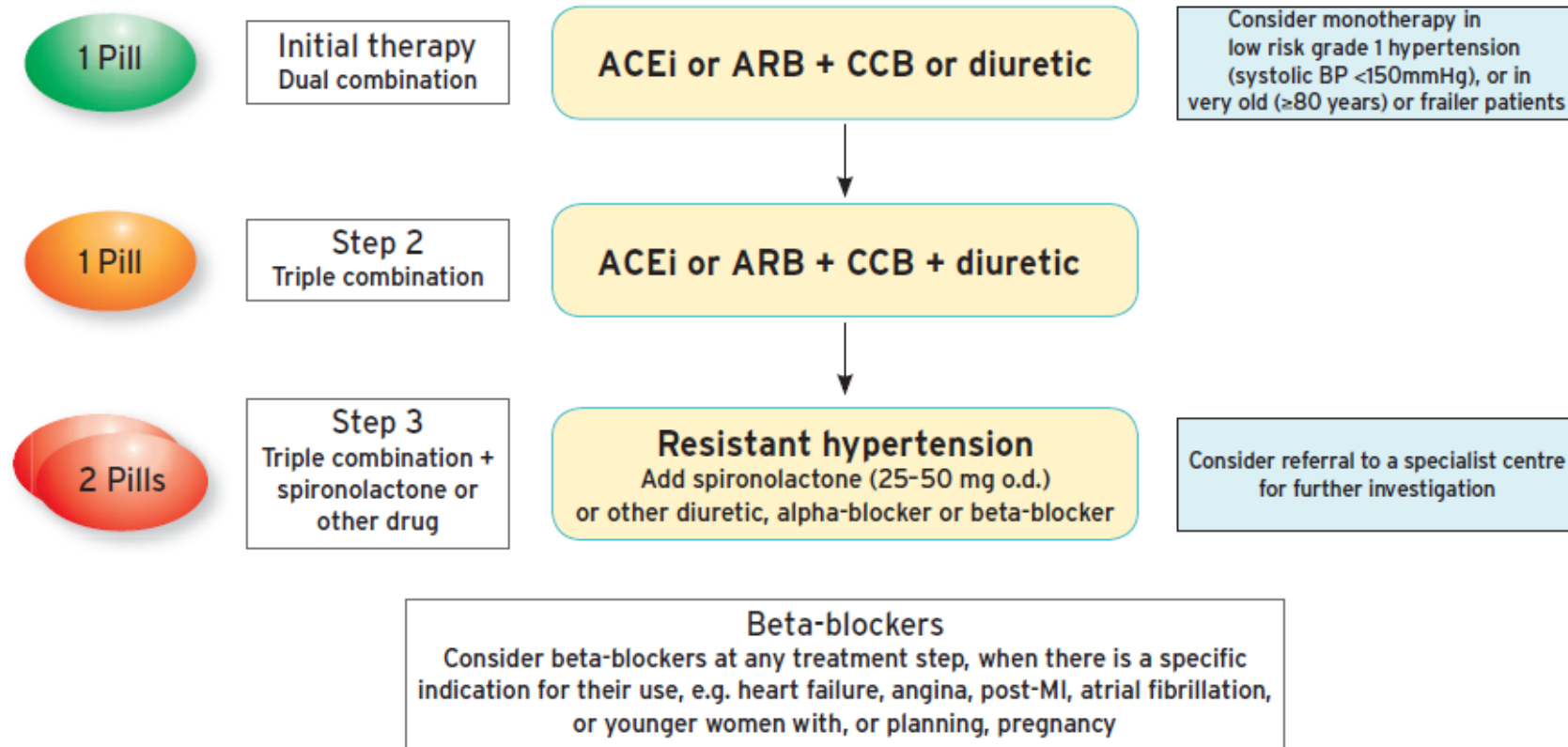
## Guideline recommendations for SPC: 2017 ACC/AHA Clinical Practice Guidelines

Initiation of antihypertensive drug therapy with 2 first-line agents of different classes, either as separate agents **or in a fixed-dose combination**, is recommended in adults with stage 2 hypertension and an average BP more than 20/10 mm Hg above their BP target.

Whelton PK, Carey RM, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APha/ASH/ASPC/NMA/PCNA Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. *Hypertension*. 2018;71:e13–e115.



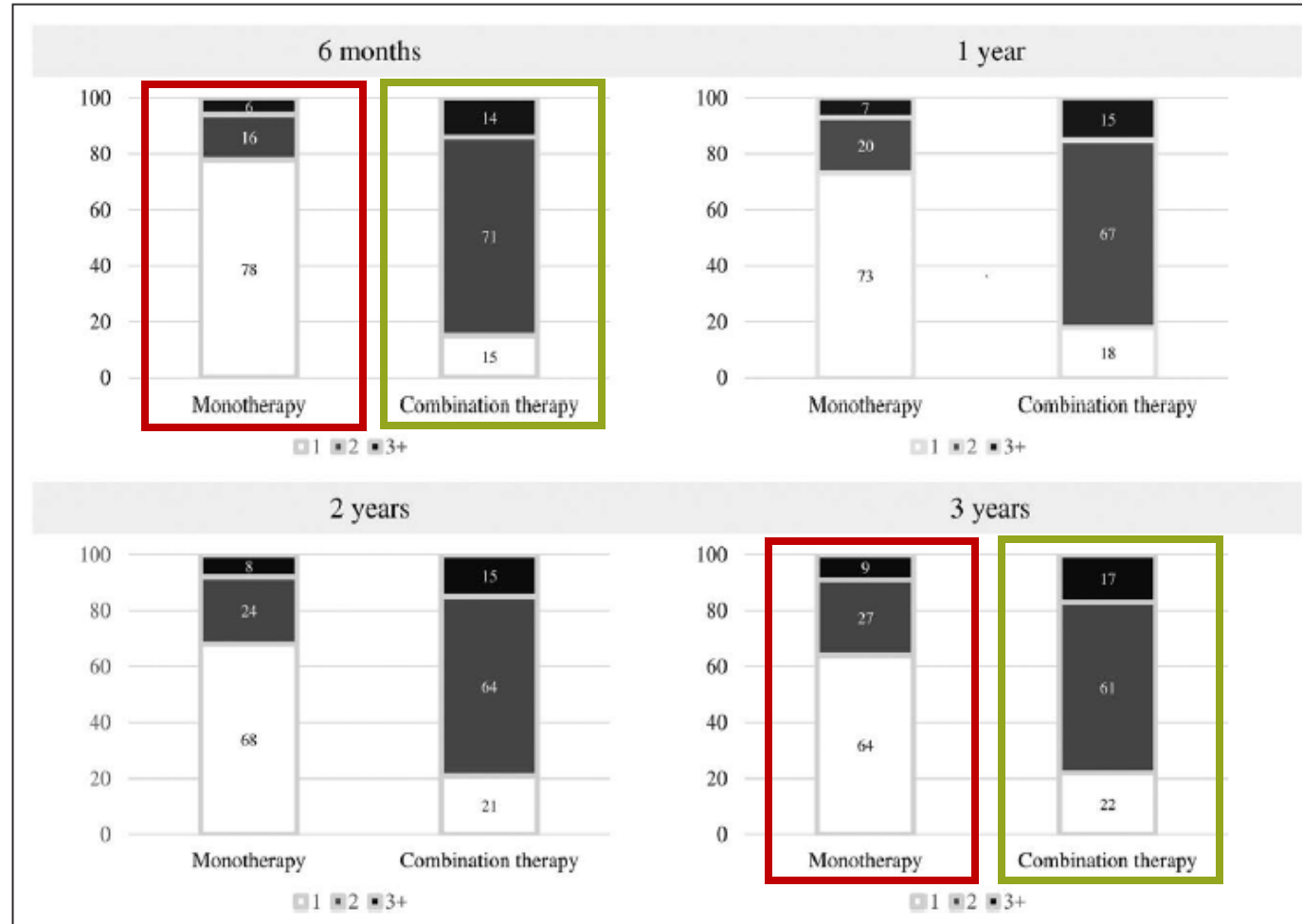
# Guideline recommendations for SPC: 2018 European Society of Hypertension/European Society for Cardiology



Williams B, Mancia G, Spiering W, et al. 2018 ESC/ESH Guidelines for the management of arterial hypertension: The Task Force for the management of arterial hypertension of the European Society of Cardiology and the European Society of Hypertension: The Task Force for the management of arterial hypertension of the European Society of Cardiology and the European Society of Hypertension [published correction appears in *J Hypertens*. 2019 Jan;37(1):226]. *J Hypertens*. 2018;36(10):1953-2041. doi:10.1097/HJH.0000000000001940

# Initiating treatment: monotherapy vs. combination therapy

*Impact on future treatment*

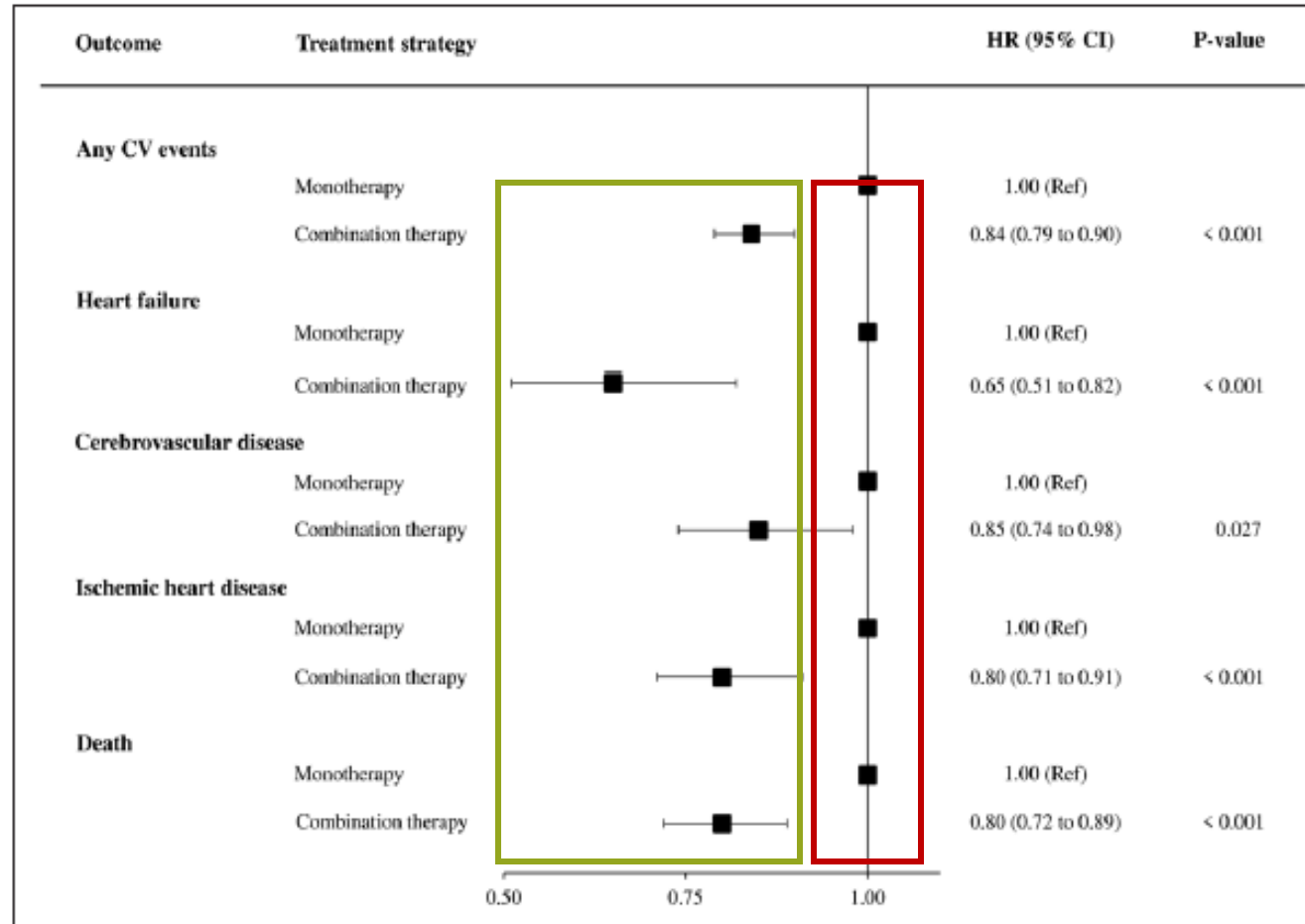


**Figure 2.** Percentage of patients under 1, 2, and ≥3 antihypertensive drug prescription in the group prescribed initial monotherapy or 2-drug combination therapy, the drugs being given separately or as a fixed-dose single tablet. Data are shown for the sixth month and the first, second, and third year after the initial prescription date.

Rea F, Corrao G, Merlino L et al. Initial Antihypertensive Treatment Strategies and Therapeutic Inertia: Evidence From a Large Population-Based Cohort. *Hypertension*. 2018;72:846-853.

# Initiating treatment: monotherapy vs. combination therapy

## CV outcomes and death



Rea F, Corrao G, Merlino L et al. Initial Antihypertensive Treatment Strategies and Therapeutic Inertia: Evidence From a Large Population-Based Cohort. *Hypertension*. 2018;72:846-853.

**Figure 4.** Hazard ratios (HR) and 95% CI estimating the risk of cardiovascular (CV) outcomes and death between patients with initial antihypertensive monotherapy and initial 2-drug fixed-dose combination therapy. Patients were initially matched by high-dimensional propensity score and outcomes were collected during the 3-year follow-up. The initial monotherapy group was taken as reference.

# Using single-pill combinations (SPCs)

- Helps patients lower BPs and reach goal faster
- May help with adherence compared to using multiple pills
- Reduces adverse effects if lower doses are used
- Many SPCs available on Medicaid and 340B formularies; also may be available at low cost through discount programs

Feldman RD1, Zou GY, Vandervoort MK, Wong CJ, Nelson SA, Feagan BG. A simplified approach to the treatment of uncomplicated hypertension: a cluster randomized, controlled trial. *Hypertension*. 2009 Apr;53(4):646-53. doi:10.1161/HYPERTENSIONAHA.108.123455.

Verma AA, Khuu W, Tadrous M, Gomes T, Mamdani MM. Fixed-dose combination antihypertensive medications, adherence, and clinical outcomes: A population-based retrospective cohort study. *PLoS Med*. 2018;15(6):e1002584. Published 2018 Jun 11. doi:10.1371/journal.pmed.1002584

## Take home #3

***Initiating treatment with 2 medications at low-to-standard doses is more effective at reducing BP and getting BP to goal than monotherapy with less adverse effects***

# Addressing therapeutic inertia

*Use single pill combination medications*

*Use a treatment protocol*

*Follow up frequently until control is achieved*

# Top 200 outpatient drug prescriptions

*Focusing on HTN medications prescribed...*

Lisinopril= ~**97,600,000** total prescriptions in 2018

Amlodipine = ~**75,800,000** prescriptions

Losartan = ~**50,480,000** prescriptions

HCTZ = ~**40,580,000** prescriptions....

***1<sup>st</sup> SPC on list -> HCTZ-Lisinopril = ~15,930,000***

Kane SP. ClinCalc DrugStats Database, Version 21.1. ClinCalc: <https://clincalc.com/DrugStats>. Updated December 1, 2020. Accessed June 10, 2021.

# Benefits of using a treatment protocol

- Supports prescribers with treatment intensification at the point of care
- Provides entire care team with playbook for who needs treatment, what treatment is needed and when follow-up should occur
- Serves as part of a multipronged, systematic approach to improving blood pressure control

*Sample treatment protocols available at: <https://millionhearts.hhs.gov/tools-protocols/protocols.html>*

Go AS, Bauman MA, Coleman King SM, et al. An effective approach to high blood pressure control: a science advisory from the American Heart Association, the American College of Cardiology, and the Centers for Disease Control and Prevention. *J Am Coll Cardiol*. 2014;63(12):1230-1238. doi:10.1016/j.jacc.2013.11.007



## Take home #4

***A treatment protocol can help increase the use of evidence-based treatment for patients with high blood pressure***

# Addressing therapeutic inertia

*Use single pill combination medications*

*Use a treatment protocol*

*Follow up frequently until control is achieved*

# Guideline recommendations for follow-up: 2017 ACC/AHA Clinical Practice Guidelines

Adults initiating a new or adjusted drug regimen for hypertension should have a follow-up evaluation of adherence and response to treatment at monthly intervals until control is achieved.

Whelton PK, Carey RM, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APha/ASH/ASPC/NMA/PCNA Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. *Hypertension*. 2018;71:e13–e115.



# Practical implementation considerations

# Addressing therapeutic inertia: AMA experience

- Obtain accurate and reliable BP measurements, in and outside of clinical settings
  - Use self-measured blood pressure
- Deliver relevant and timely physician and provider education
  - Ideally supported by personalized data

# Addressing therapeutic inertia: AMA experience

- Engage physicians and providers in the development and dissemination of a treatment protocol
- Make a treatment protocol accessible and user-friendly
  - Consider EHR integration and/or clinical decision support
  - Consider including cost and formulary information

# Addressing therapeutic inertia: AMA experience

- Consider all options for follow-up
  - Use self-measured blood pressure
  - Follow-up visits with RNs and MAs
- Utilize a team-based and multidisciplinary approach

*+ all of the above and anything else that helps!*

## Take home #5

***Health care organizations, care teams, physicians and other providers must all work together to reduce therapeutic inertia and improve blood pressure control***





**Thank you!**

# NACHC's Million Hearts Team



**Margaret (Meg) Meador, MPH, C-PHI, CPHQ**  
Director of Clinical Integration and Education



# Preventing Heart Attacks and Strokes in Primary Care Project

Meg Meador, MPH, C-PHI, CPHQ  
Director, Clinical Integration & Education  
National Association of Community Health Centers (NACHC)

Elevate Learning Forum  
June 15, 2021

# 2018-2021 Improvement Projects



## Improving BP Control for African Americans (BPAA)

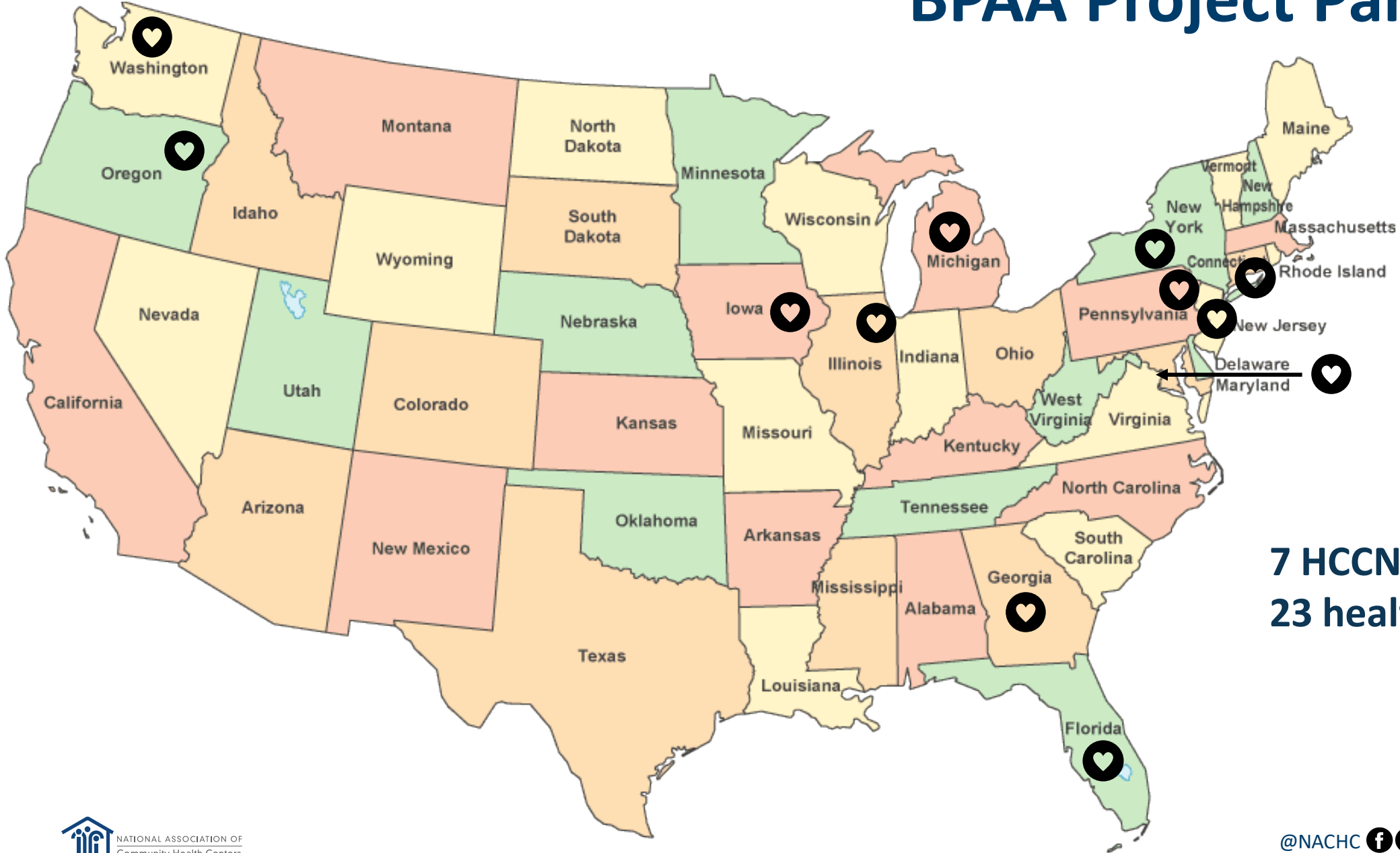
- Use BPAA Roadmap
- Leverage medication intensification measures
- Test AA-specific patient engagement strategies
- Implement/optimize use of SMBP



## Increasing Appropriate Use of Statin Therapy for High-Risk Groups

- Use Statin Roadmap
- Test new tools/resources (e.g., statin animated video, lifestyle & statin infographic)
- Increase understanding of risk groups
- Contribute to CDC Cholesterol Change Package

# BPAA Project Partners



**7 HCCNs**  
**23 health centers**



# Improving BP Control for African Americans Roadmap



	Core Strategies	Electives	Capstone
<b>BP Control Range</b>	<60% BP Control for African Americans	61 - 79% BP Control for African Americans	≥ 80% BP control for African Americans
<b>Goals</b>	<ul style="list-style-type: none"> <li>• ≥15% improvement in BP control for African Americans OR</li> <li>• ≥10 mmHg reduction in average systolic BP for African Americans</li> </ul>	<ul style="list-style-type: none"> <li>• ≥10% improvement in BP control for African Americans OR</li> <li>• ≥10 mmHg reduction in average systolic BP for African Americans</li> </ul>	<ul style="list-style-type: none"> <li>• 1+ emerging best practice</li> <li>• Apply to be a Million Hearts Hypertension Control Champion</li> </ul>
<b>Increase Medication Intensification /Optimize Therapy</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Train clinicians on guideline-supported treatment algorithm, (e.g., AMA Hypertension Treatment algorithm)</li> <li><input type="checkbox"/> Embed algorithm into care processes</li> <li><input type="checkbox"/> Develop care gap reports to address therapeutic inertia</li> <li><input type="checkbox"/> Develop population health registries and point of care clinical decision support to identify:               <ul style="list-style-type: none"> <li>○ Patients with uncontrolled hypertension</li> <li>○ Patients with uncontrolled hypertension:                   <ul style="list-style-type: none"> <li>• Not on a guideline-recommended therapy</li> <li>• On mono-therapy</li> </ul> </li> <li>○ Patients with undiagnosed hypertension</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop collaborative practice agreements for pharmacists:               <ul style="list-style-type: none"> <li>○ Refill Authorization</li> <li>○ Medication titration</li> <li>○ Formulary Management</li> </ul> </li> <li><input type="checkbox"/> Plan for SMBP               <ul style="list-style-type: none"> <li>○ Develop practice protocols, e.g.:                   <ul style="list-style-type: none"> <li>• Training patients to perform SMBP</li> <li>• Transmission of SMBP readings to care team</li> </ul> </li> <li>○ Designate/configure structured fields to document SMBP averages and related data elements in EHR</li> </ul> </li> <li><input type="checkbox"/> Implement SMBP               <ul style="list-style-type: none"> <li>○ Train all eligible patients and teams to use evidence-based measurement protocol</li> <li>○ Use SMBP average to confirm diagnosis, assess control, and guide treatment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Focus on hard to reach patients and “resistant” hypertension</li> </ul>
<b>Increase Touchpoints</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Establish frequent follow-up protocol for patients with uncontrolled hypertension (e.g., 2-4 weeks), including use of telemedicine</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Data-driven patient outreach</li> <li><input type="checkbox"/> Non-billable nurse/MA visits for blood pressure checks</li> <li><input type="checkbox"/> Optimize telemedicine for frequent follow up</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Tailored outreach to patients engaged in care</li> <li><input type="checkbox"/> Develop other innovative strategies to increase care delivery capacity (e.g., community partnerships)</li> </ul>
<b>Improve Medication Adherence</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assess for non-adherence (e.g., questionnaires, pill counts, contextual flags, missed appointments, infrequent refills)</li> <li>Offer solutions:               <ul style="list-style-type: none"> <li>○ Prescribe low-cost generics</li> <li>○ Prescribe single-pill combination therapy</li> <li>○ Align prescription refills</li> <li>○ Reminders/approaches to address “forgetfulness”</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Expand care team encounters to include medication education and adherence coaching</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Partner with payers or pharmacies to improve prescription fill data</li> <li><input type="checkbox"/> Measure medication adherence               <ul style="list-style-type: none"> <li>○ Proportion of days covered</li> <li>○ Medication possession ratio</li> </ul> </li> </ul>
<b>Improve Patient Engagement</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Apply shared-decision making at initiation of treatment plan and throughout</li> <li><input type="checkbox"/> Use collaborative communication skills in conversations (e.g., non-judgmental, ask about side effects, ask about cost and logistical issues)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assist patients with obtaining validated, automated home BP measurement devices with appropriately-sized upper arm cuffs</li> <li><input type="checkbox"/> Use SMBP and available telemedicine modalities to engage patients in self-management</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop other innovative strategies to increase patient engagement among African Americans               <ul style="list-style-type: none"> <li>○ Culturally sensitive patient-centered interventions that address self-management barriers</li> <li>○ Interventions that leverage social networks</li> <li>○ Interventions that address...</li> </ul> </li> </ul>

## Priority Population: Adult African Americans with Hypertension

Increase BP control by 10%

Reduce average systolic BP by 10 mmHg (cohort of patients with uncontrolled HTN at baseline)

Improve Medication Intensification for patients with uncontrolled HTN



Increase use of guideline-recommended therapy for patients with uncontrolled HTN

Reduce % of patients with uncontrolled HTN on no therapy or monotherapy

Increase rate at which a medication class is added when a patient presents with uncontrolled HTN

# Goals & Measures

- Registries & Outreach
- Pre-visit Planning
- Care Team Reports
- Other CDS



# Medication Intensification Intervention Examples

Consider diuretic or CCB

## Search Criteria

Active  
AND Age between 19 and 59 years  
AND Race = 'Black or African American'  
AND Have Problem: 'Hypertension, Essential' (Period = Any period)  
AND NOT Taking Medication Category: 'Calcium Channel Blocker' or 'Diuretic' (Period = Any period)  
AND NOT Taking Medication: 'Calcium Channel Blocker' or 'Diuretic' (Period = Any period)  
AND Most Recent Blood Pressure (Value: Systolic > 140, Diastolic > 90; Period = Any period)  
AND Had Visit (Type = Any; Period = Any period; Min Count = 1; Facility = 'Broad Street Ministry' Center' or '.YHEP Health Center')

## Query Logic for CDS:

*“My greatest lesson learned this year is that medication intensification needs to be a focus of provider education and operationalizing SMBP workflows.”*

*“My greatest lesson learned this year is we need to emphasize rapid intensification of therapy.”*



## Multiple education sessions for providers:

- Medication management of uncontrolled HTN
- Importance of combination therapy
- Increased frequency of touchpoints/visits until patients has BP under control



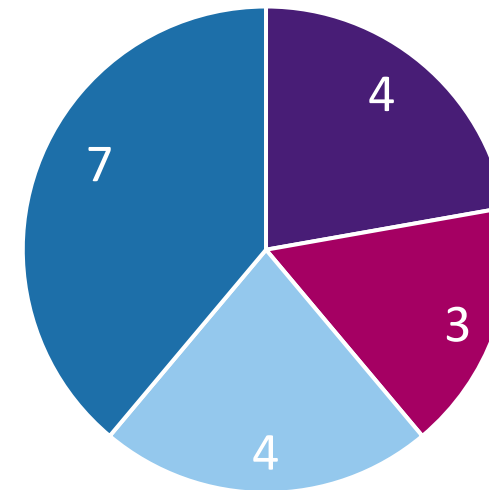
# Example: SMBP Pilot

## “Know Before You Go”:

- Many patients need help with phone apps, email setup
  - Average of 1 hour staff/program associate time per patient (longer than anticipated)
- More review needed on in-clinic BP measurement technique
- Without a dedicated staff member, not able to get the SMBP program off the ground
- What didn't work: SMBP where the patient reads off the BP readings.


*“My greatest lesson learned this year is SMBP readings are extremely important for [blood pressure] control.”*

## SMPB Pilot Progress



- Not Activated
- Activated, no BPs sent
- Still Out of Range
- BP in Control

# Resources

A		B		C		D		E		F		G		H		I	
		Review Date:				Provider:				CI Index*: #DIV/0!							
No.	Patient Identifier	Visit Date ~ 8 weeks ago	Ave BP from this and prior visit	Action Taken: Select from dropdown (Select all that apply)	Enter comments if "Other" chosen under Action Taken	8-Week Outcome (Select one from dropdown)	Notes: Select from dropdown (Select all that apply)	Enter comments if "Other" chosen under Notes									
1									 <p><b>Act Rapidly Clinical Inertia Tool (Excel): Guidance for practice site</b></p> <p>I. Identify your sample</p> <ul style="list-style-type: none"> <li>For each provider in your practice or health center, review patient charts from visits that were during the week that began eight weeks before the assessment. Identify 12 visits during that week in which a patient had uncontrolled blood pressure (<math>\geq 140/90</math> mmHg). The workbook has capacity audits on 9 providers, each with a separate worksheet. Enter the provider's name at the top in the designated location.</li> <li>Exclude a visit if it was a new patient encounter or for a procedure (e.g., stress test or biopsy)</li> </ul> <p>II. Complete the ACT RAPIDLY Assessment tool using the ACT RAPIDLY Microsoft™ Excel Workbook</p> <ul style="list-style-type: none"> <li>Fill out the information in each column</li> <li>When instructed to select from dropdown, click the cell and the dropdown arrow will appear to select the appropriate answer.</li> <li>Where "select all that apply" is listed, use a new line for each dropdown selection.</li> </ul> <p>The Microsoft™ Excel ACT RAPIDLY Workbook will automatically calculate the <b>Clinical Inertia Index</b> (C) using the methodology below –</p> <ul style="list-style-type: none"> <li>Add up all of the visits where you either indicated any of the following under "Action Taken": under "Eight-Week Outcome": BP unknown or BP still high.</li> <li>Divide this number by all of the visits that you reviewed during this assessment.           <ul style="list-style-type: none"> <li>For example, after reviewing the medical records for 12 visits with high BP readings, if you that your practice or health center did not address the patient's blood pressure during or has not obtained follow-up blood pressures for the three other visits, then the CI index is <math>4/12 = 0.33</math>. When your practice successfully acts rapidly, its CI Index will be close to zero</li> <li>You can use the CI Index as a quarterly benchmark to track how well your quality improve efforts are working.</li> </ul> </li> </ul> <p><b>Identify the "Solutions" tab (found after Audit 9" tab):</b> After you have completed the ACT RAPIDLY / tool using the Microsoft™ Excel ACT RAPIDLY workbook, the "Solutions" tab will bring together all of 1 that your practice or health center collected.</p>								
2																	
3																	
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## ACT Rapidly Clinical Inertia Tool:

[https://www.nachc.org/wp-content/uploads/2020/12/SMBP-Toolkit\\_FINAL.pdf](https://www.nachc.org/wp-content/uploads/2020/12/SMBP-Toolkit_FINAL.pdf)

# Resources

## SMBP Toolkit (2020):

[https://www.nachc.org/wp-content/uploads/2020/12/SMBP-Toolkit\\_FINAL.pdf](https://www.nachc.org/wp-content/uploads/2020/12/SMBP-Toolkit_FINAL.pdf)

- Determining SMBP Goals & Priority Populations
- SMBP Protocol Design Checklist
- SMBP Tasks by Role
- Aligning SMBP Patient Training Approach to Practice Environment

## SMBP Implementation Guide (2018):

<https://www.nachc.org/clinical-matters/nachc-health-care-delivery-smbp-implementation-guide-08222018/>

- Optimize your SMBP approach:
  - Strategies/change ideas to shore up areas where your approach most needs attention
  - Specific examples of tools and resources shared by health centers who have successfully implemented SMBP



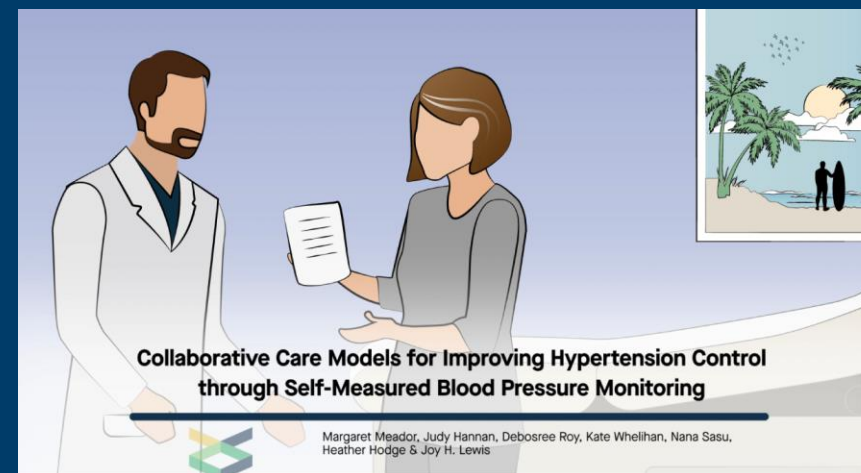
# Resources

## Collaborative Models for Improving HTN Control through SMBP Video

<https://youtu.be/l-mtmBAT6Nw>

## Buying Home Blood Pressure Monitors to Support SMBP

- Recording: <https://www.youtube.com/watch?v=JPGt91aYbSY>
- At-a-Glance Comparison: [https://www.nachc.org/wp-content/uploads/2021/05/Choosing-a-Home-BP-Monitor\\_At-a-Glance-Comparison.pdf](https://www.nachc.org/wp-content/uploads/2021/05/Choosing-a-Home-BP-Monitor_At-a-Glance-Comparison.pdf)
- Notes/Scoring Rubric Tool: [https://www.nachc.org/wp-content/uploads/2021/05/Home-BP-Monitor-Considerations-and-Comparisons\\_Notes-and-Rubric.xlsx](https://www.nachc.org/wp-content/uploads/2021/05/Home-BP-Monitor-Considerations-and-Comparisons_Notes-and-Rubric.xlsx)



CHOOSING A HOME BLOOD PRESSURE MONITOR FOR YOUR PRACTICE										
At-a-Glance Comparison										
LEGEND: YES NO										
DEVICE MANUFACTURER	DEVICE NAME	ON U.S. VALIDATED DEVICE LISTING	UPPER ARM DEVICE	XL CUFF AVAILABLE	BLUETOOTH-ENABLED SELF REPORTING	AC ADAPTER AVAILABLE	MEMORY STORAGE CAPACITY (measurements per user)	NUMBER OF USERS	AVERAGING CAPABILITY (Device takes 2-3 measurements automatically and calculates the average)	MONI DASH
A&D Medical	UA-651 Essential	*					30	1		
A&D Medical	UA-651BLE Wireless	*					30	1		
A&D Medical	UA-767F Premium	*					60	4		
A&D Medical	UA-1030T Talking						90	1		
A&D Medical	Ultraconnect Wireless						100	5		
A&D Medical	UA-789AC Extra Large	**					60	1		
Hillrom-Welch Allyn	Welch Allyn Home Blood Pressure Monitor 1700 Series						99	1		
Omron	Bronze Upper Arm						14	1		
Omron	3 Series Upper Arm						14	1		



# Thank you!

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National Association of Community Health Centers  
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## Packaging and implementing evidence-based transformational strategies for safety-net providers

*Bringing science, knowledge, and innovation to practice*



**Cheryl Modica**

Director,  
Quality Center



**Luke Ertle**

Manager,  
Quality Center



**Camila Silva**

Manager, Quality Center  
Training & Curriculum



**Lizzie Utset**

Specialist, Quality Center



# Evidence-Based Action Guide

## Action Guide

The image shows the cover of the 'Evidence-Based Care Action Guide' document. At the top, it features the logo of the National Association of Community Health Centers. Below that, the title 'VALUE TRANSFORMATION FRAMEWORK Action Guide' is displayed. A navigation bar includes 'HEALTH CENTER', 'INFRASTRUCTURE', 'CARE DELIVERY', and 'PEOPLE'. The main section is titled 'EVIDENCE-BASED CARE' and contains two columns of text. The left column is headed 'WHY' and discusses the importance of evidence-based care. The right column is headed 'EVIDENCE-BASED CARE' and describes the process of integrating clinical expertise with research. Below this, a 'WHAT' section explains how health centers can package condition-specific interventions. An icon of a magnifying glass over a group of people is also present. At the bottom, a blue box states that the guide is intended to be paired with condition-specific companion guides. A small copyright notice is at the very bottom.

NATIONAL ASSOCIATION OF  
Community Health Centers

VALUE TRANSFORMATION FRAMEWORK  
*Action Guide*

HEALTH CENTER

INFRASTRUCTURE CARE DELIVERY PEOPLE

EVIDENCE-BASED CARE

**WHY**  
take a systems approach to  
evidence-based care?

When "evidence" is the foundation for care decisions and interventions - rather than opinion, common practice, or expediency - better outcomes can be achieved. Performance on key clinical conditions can improve when decisions to implement evidence-based condition-specific interventions are combined with evidence-based systems-level interventions.

This strategy supports value transformation - the process of changing organizational systems of infrastructure, care delivery, and people in order to reach the Quadruple Aim goals of: improved health outcomes, improved patient and staff experience, and reduced costs.

**EVIDENCE-BASED CARE**  
Make patient care decisions using a process that integrates clinical expertise and best-practice research with patient values and self-care motivators.

**WHAT**  
can health centers do differently when it comes to evidence-based care?

Health centers can "package" condition-specific, evidence-based interventions with systems-level interventions for greater impact. The Community Preventive Services Task Force (CPSTF) recommends multi-component interventions be used to address disease-specific conditions.<sup>1</sup>

The National Association of Community Health Centers's (NACHC) Value Transformation Framework offers a process for considering and applying condition-specific interventions within the context of overall health center systems-change. The Framework's accompanying Action Guides outline how to make these changes.

This Evidence-Based Care Action Guide is intended to be paired with condition-specific, companion guides. It makes the broad case for nesting clinical care improvements within system improvements. Taken together, this action guide and its companions offer health centers actionable road maps to transforming health center systems and delivering evidence-based care.

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## Actions

Pair the Evidence-Based Action Guide with condition-specific companion guides – nesting clinical improvements within overall system improvements

## Resources

[Evidence-Based Care Action Guide](#)

[Cancer Screening Action Guide](#)

[Diabetes Control Action Guide](#)

[HTN Screening & Control Action Guide](#)

[http://bit.ly/VTF\\_EvidenceBasedCare](http://bit.ly/VTF_EvidenceBasedCare)

*Change Area*

## **EVIDENCE-BASED CARE**



- **STEP 1 Engage Leadership**
- **STEP 2 Apply Population Health Management Strategies / Risk Stratification and Registries**
- **STEP 3 Design Models of Care that Incorporate Evidence-Based Interventions**
- **STEP 4 Create/Update Clinical Policies and Standing Orders**
- **STEP 5 Deploy Care Teams in New Ways**
- **STEP 6 Optimize Health Information Systems**
- **STEP 7 Engage Patients and Support Self-Management**
- **STEP 8 Develop/Enhance Community Partnerships**
- **STEP 9 Tailor Treatment for Social Context**
- **STEP 10 Maximize Reimbursement**



# Action Guides: Cancer Screening Diabetes Control HTN Screening & Control

- Synthesis of the evidence-base
- Guidelines and recommendations
- Sample clinical policies
- Sample standing orders
- Care team training resources
- Links to documentation guides for leading EHRs
- Links to patient educational resources
- Links to guides supporting community partnerships
- Reimbursement and payment strategies

**VALUE TRANSFORMATION FRAMEWORK**  
Companion Action Guide >> Evidence-Based Care

HEALTH CENTER

INFRASTRUCTURE CARE DELIVERY PEOPLE

## HYPERTENSION SCREENING & CONTROL

For a health center to identify and manage hypertension in a way that improves health outcomes, improves patient and provider experiences, reduces costs, and addresses equity (the Quintuple Aim), evidence-based HTN interventions must be coupled with larger systems-level change. NACHC's Value Transformation Framework is designed to guide this systems approach to transformation.

**WHY**  
is attention to hypertension so important?

Hypertension (HTN) has reached epidemic proportions in the United States. Nearly half of all adults in the U.S. (49%) are diagnosed with HTN or take medication for HTN.<sup>1</sup> Sustained, elevated blood pressure puts patients at risk for strokes, heart attacks, kidney failure, and death.<sup>2</sup> In 2019 alone, high blood pressure contributed to over 1,200 deaths each day.<sup>3</sup> Patients with hypertension may also be at greater risk of severe illness from COVID-19.<sup>4</sup> Costs linked to high blood pressure equal about \$131 billion each year in the United States.<sup>5</sup>

Tackling this epidemic requires identification and control of hypertension. Of the 75 million Americans with this condition, approximately 11 million don't know they have it, so they are not receiving treatment. Among the nearly 35 million who know about their diagnosis, slightly more than half (16.1 million) do not have it under control.<sup>6</sup>

In health centers, hypertension is the most prevalent chronic condition. Close to 5 million patients (nearly one quarter of all adult health center patients) are diagnosed with high blood pressure, yet 37% of them don't have it under control (defined in health center reporting requirements as <140/90 mm Hg).<sup>7</sup> These statistics exist despite significant national and local efforts to reduce and control HTN, including:

- **Million Hearts® 2022** by the Centers for Disease Control and Prevention (CDC) and the Centers for Medicare and Medicaid Services (CMS). **Million Hearts**™ aims to prevent 1 million heart attacks and strokes within 5 years, and has set a goal that 80% of patients age 18 and older have their blood pressure under control by 2022. NACHC leads a Million Hearts initiative.
- **Target: BP™** is a national initiative of the American Association of Nurse Practitioners (AANP) that aims to help local health centers through evidence-based quality improvements.
- The Health Resources and Services Administration's **Health Center Program**, which recognizes health centers as essential community assets to provide a

This Evidence-Based Companion Guide on Hypertension provides evidence-based steps to identify and manage HTN, to identify and manage HTN within the context of a Value Transformation Framework.

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**VALUE TRANSFORMATION FRAMEWORK**  
Companion Action Guide >> Evidence-Based Care

HEALTH CENTER

INFRASTRUCTURE CARE DELIVERY PEOPLE

## CANCER SCREENING

Providing cervical and colorectal cancer screening that improves health outcomes, improves patient and provider experiences, and reduces costs (the Quintuple Aim), requires health centers to couple evidence-based cancer screening interventions with larger systems-level change. NACHC's Value Transformation Framework is designed to guide this systems approach to transformation.

**WHY**  
is attention to cancer screening so important?

Over 50,000 adults in the United States (U.S.) are expected to die from colorectal cancer in 2019, the third leading cause of cancer-related death.<sup>1</sup> Approximately 13,000 U.S. women will be diagnosed with cervical cancer in 2019, and roughly 4,250 will die.<sup>2</sup>

Screening to detect polyps or cancer at an early stage has been proven to save lives.<sup>3</sup> The United States Preventive Services Task Force (USPSTF) gives a "Grade A" – its highest endorsement – to the recommendation to screen for colorectal cancer from age 50 to 75<sup>4</sup> and for cervical cancer from age 21 to 65.<sup>5</sup> The Healthy People 2020 screening targets for these populations are 70.5% and 93% for colorectal and cervical cancer screening, respectively.<sup>6</sup>

Despite these goals, one quarter of adults 50 – 75 years old have never been screened for colorectal cancer.<sup>7</sup> In 2016, 67% of eligible adults were up-to-date with colorectal cancer screening (CRCS)<sup>8</sup> as compared to 40% in health centers.<sup>9</sup> Screening prevalence is lower among immigrants who have been in the U.S. for less than 10 years.<sup>10</sup>

The same trends hold for cervical cancer screening, despite evidence that it also saves lives. In 2015, 81% of eligible women were up-to-date for cervical cancer screening<sup>11</sup> as compared to 56% in health centers.<sup>12</sup> Screening rates are lower for older women,<sup>13</sup> women with no usual source of care, no health insurance, or public insurance only, women with less than a high school education, non-Hispanic Asian women, and women who were US residents for less than 10 years.<sup>14</sup>

This Evidence-Based Companion Guide on cancer screening explores the evidence-based steps for improving colorectal and cervical cancer screening in health centers. Used alongside the Evidence-Based Care Action Guide, it offers health centers an actionable road map to cancer screening within the context of whole person care.

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**VALUE TRANSFORMATION FRAMEWORK**  
Companion Action Guide >> Evidence-Based Care

HEALTH CENTER

INFRASTRUCTURE CARE DELIVERY PEOPLE

## DIABETES CONTROL

Providing diabetes care that improves health outcomes, improves patient and provider experiences, and reduces costs (the Quintuple Aim), requires health centers to couple evidence-based diabetes interventions with larger systems-level change. NACHC's Value Transformation Framework is designed to guide this systems approach to transformation.

**WHY**  
is attention to diabetes so important?

The impact of diabetes is staggering. Americans with diabetes, 1 in 10, feel the impact of the disease. Diabetes is a leading cause of disability, and it is the leading cause of blindness, kidney failure, heart disease, and stroke. Diabetes can lead to kidney failure, lower limb amputations, and adult-onset blindness.<sup>1</sup>

The estimated cost of diabetes in the United States in 2017 was \$227 billion, including \$27 billion for direct medical costs and \$50 billion in indirect costs for disability, time lost from work, and premature death.<sup>2</sup> The cost of medical care increases significantly for every 1% increase in a patient's glycemic level (for HbA1c above 7%).<sup>3</sup> If health center patients with uncontrolled diabetes could reduce their HbA1c by just 1.25%, the potential savings in medical costs could exceed \$3.44 billion over three years.<sup>4</sup>

This Evidence-Based Companion Guide on diabetes care explores the evidence-based steps for managing patients with diabetes. Used alongside the Evidence-Based Care Action Guide, it offers health centers an actionable road map to track and control diabetes within the context of whole person care.

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# Dive Deeper



Improvement Strategy



Health Information Technology



Policy



Payment



Cost



Population Health Management



Patient Centered Medical Home



Evidence-Based Care



Care Coordination & Management



Social Determinants of Health



Patients



Care Teams



Leadership



Workforce



Partnerships

The image shows the cover of the 'Evidence-Based Care Action Guide' document. At the top, it features the logo of the National Association of Community Health Centers (NACHC). Below the logo, the title 'VALUE TRANSFORMATION FRAMEWORK Action Guide' is displayed. A navigation bar includes 'HEALTH CENTER', 'INFRASTRUCTURE', 'CARE DELIVERY', and 'PEOPLE', with 'CARE DELIVERY' highlighted. The main section is titled 'EVIDENCE-BASED CARE' and contains three sub-sections: 'WHY take a systems approach to evidence-based care?', 'WHAT can health centers do differently when it comes to evidence-based care?', and 'EVIDENCE-BASED CARE' (Make patient care decisions using a process that integrates clinical expertise and best-practice research with patient values and self-care motivators.). A QR code is located at the bottom right of the document cover.



**June 15<sup>th</sup>**  
Hypertension Deep Dive



**June 23<sup>rd</sup>**  
Cancer Screening Deep Dive




**June 30<sup>th</sup> @ 2pm**  
Diabetes Deep Dive




Scan QR code to register


# UPCOMING EVENTS


June 2021

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3 	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

-  **03. Rescheduled Date Pending Care Management, Part 2 of 2** *(Deeper Dive)*
- 08. June Elevate Core Webinar**
- 15. Evidence-Based Care (Hypertension)** *(Deeper Dive)*
- 23. Evidence-Based Care (Cancer)** *(Deeper Dive)*
- 30. Evidence-Based Care (Diabetes)** *(Deeper Dive)*

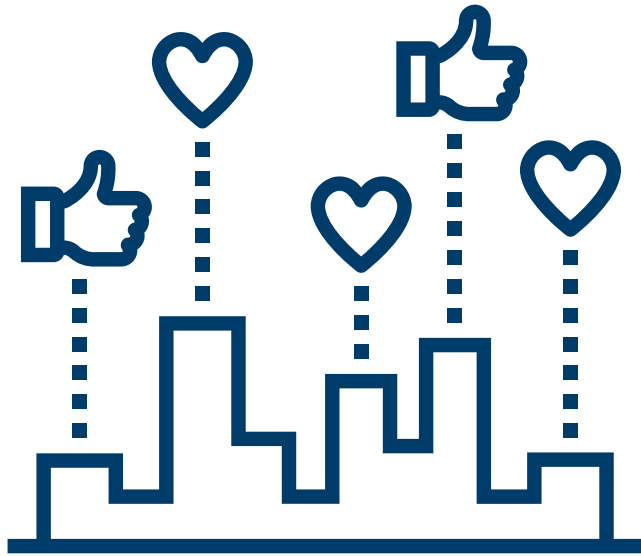
July 2021

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13 	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

-  **13. July Elevate Core Webinar**
- 20. PCMH & Resiliency during the Pandemic**
- 21. Dental Services, Part 1**
- 28. Dental Services, Part 2**

Scan QR code to register





# Provide Us Feedback

## FEEDBACK

Don't forget! Let us know what you thought about today's session.

### FOR MORE INFORMATION CONTACT:

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301.310.2250

# Next Monthly Forum Call:

July 13<sup>th</sup>, 2021  
1 -2 pm ET



elevate°

**Together, our  
voices elevate° all.**

**The Quality Center Team**

*Cheryl Modica, Luke Ertle, Camila Silva & Lizzie Utset*

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