

Practical Approaches to Eliminate Disparities in Cardiovascular Disease

Right Care Virtual University of
Best Practices
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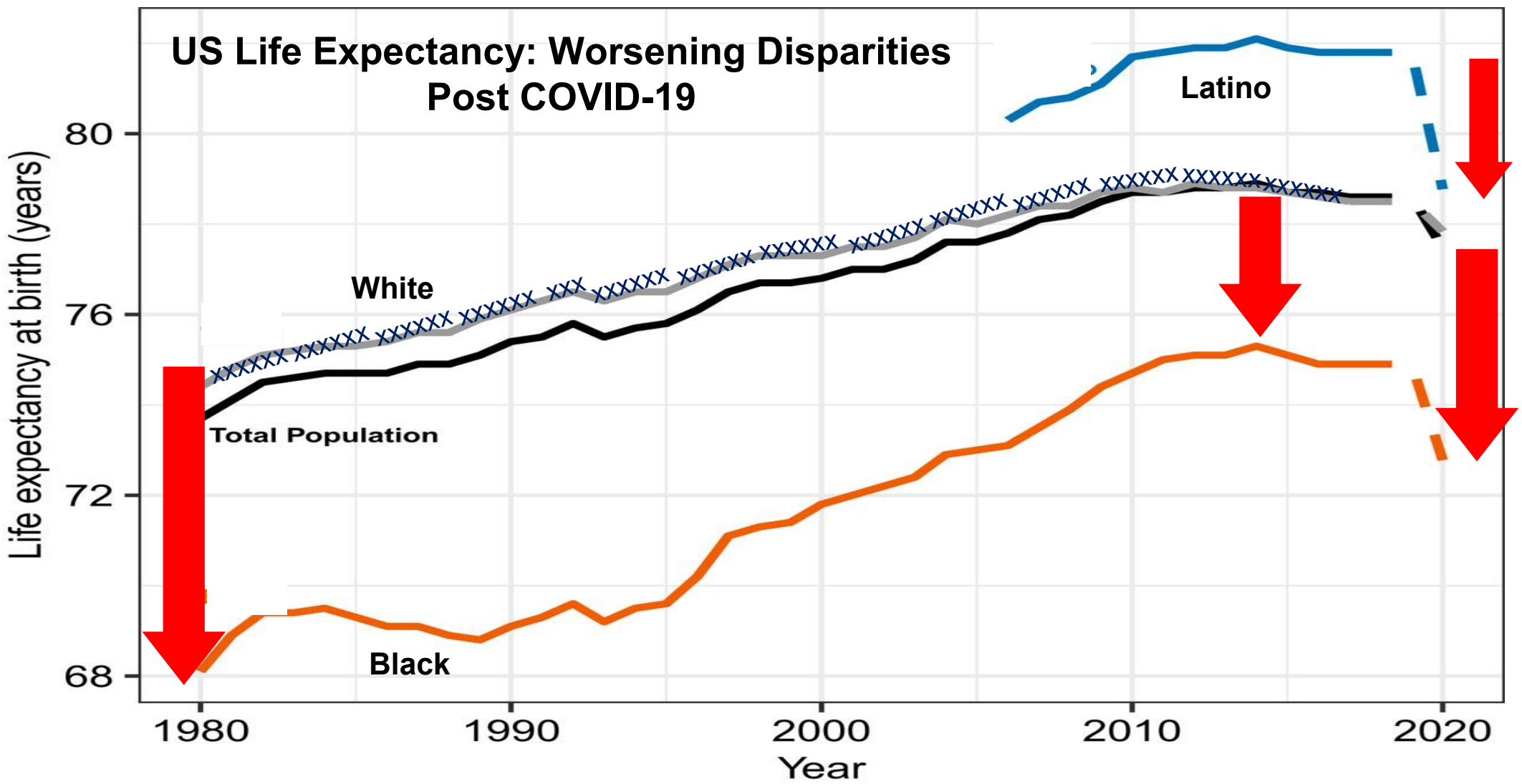
Disclosures

- Has disclosed the following affiliations:
- Any real or apparent COIs related to the presentation have been resolved.
- *Speaker's Bureau*- None
- *Consultant*- Amgen, Sanofi, Boehringer Ingelheim, Novartis, Quantum Genomics, Janssen, Eli Lilly
- *Stocks*- None
- *Patents*- None
- Principal investigator- Healthy Heart Community Prevention Project

Objectives

- Discuss evidence-based tactics that can improve cardiovascular health with focus on lipids and HTN
- Propose improvement ideas to control HTN and address cardiovascular disparities.
- Reveal practical steps to eliminate disparities

US Life Expectancy: Worsening Disparities Post COVID-19



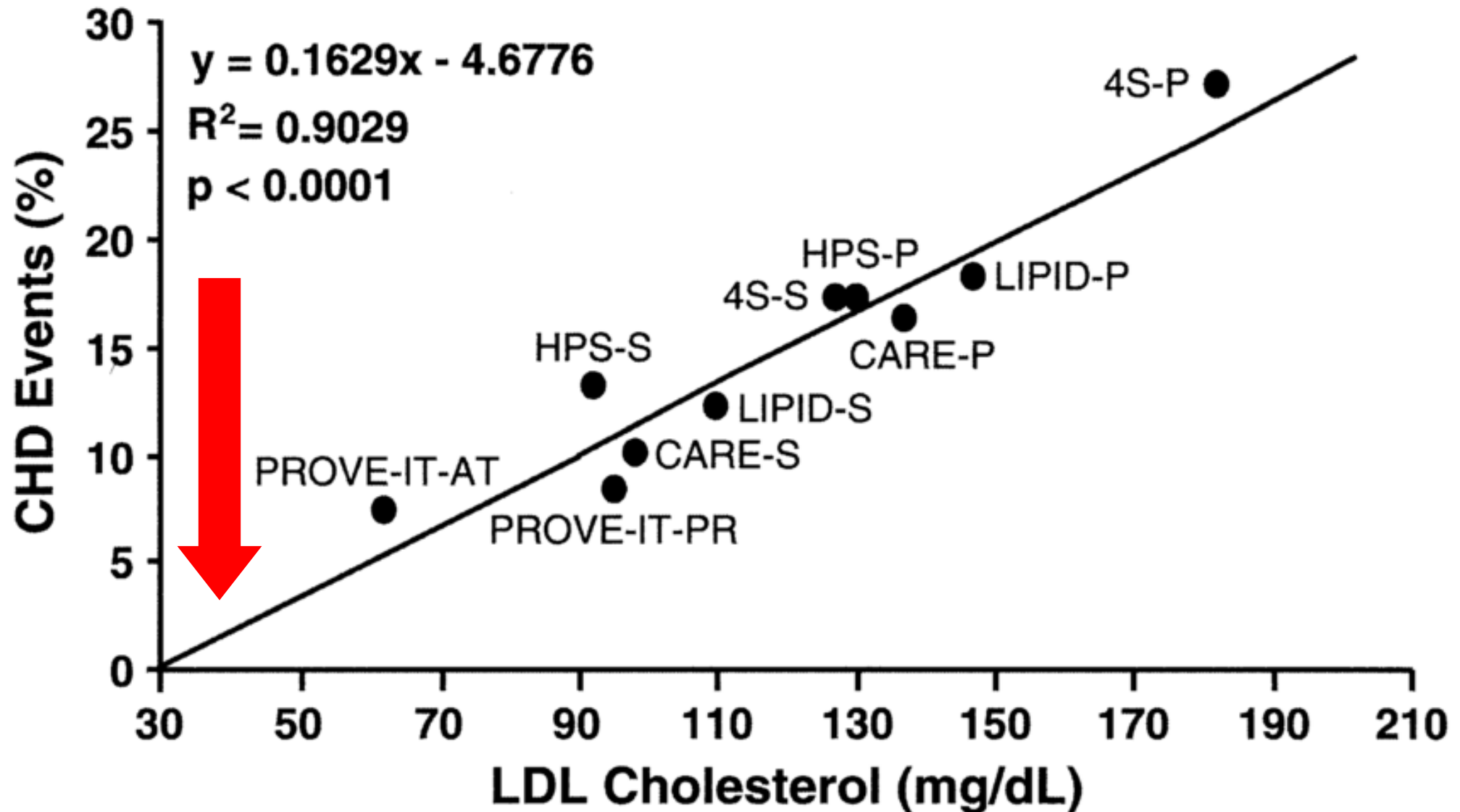
Total Population
 Latino
 White
 Black

Observed
 Projected

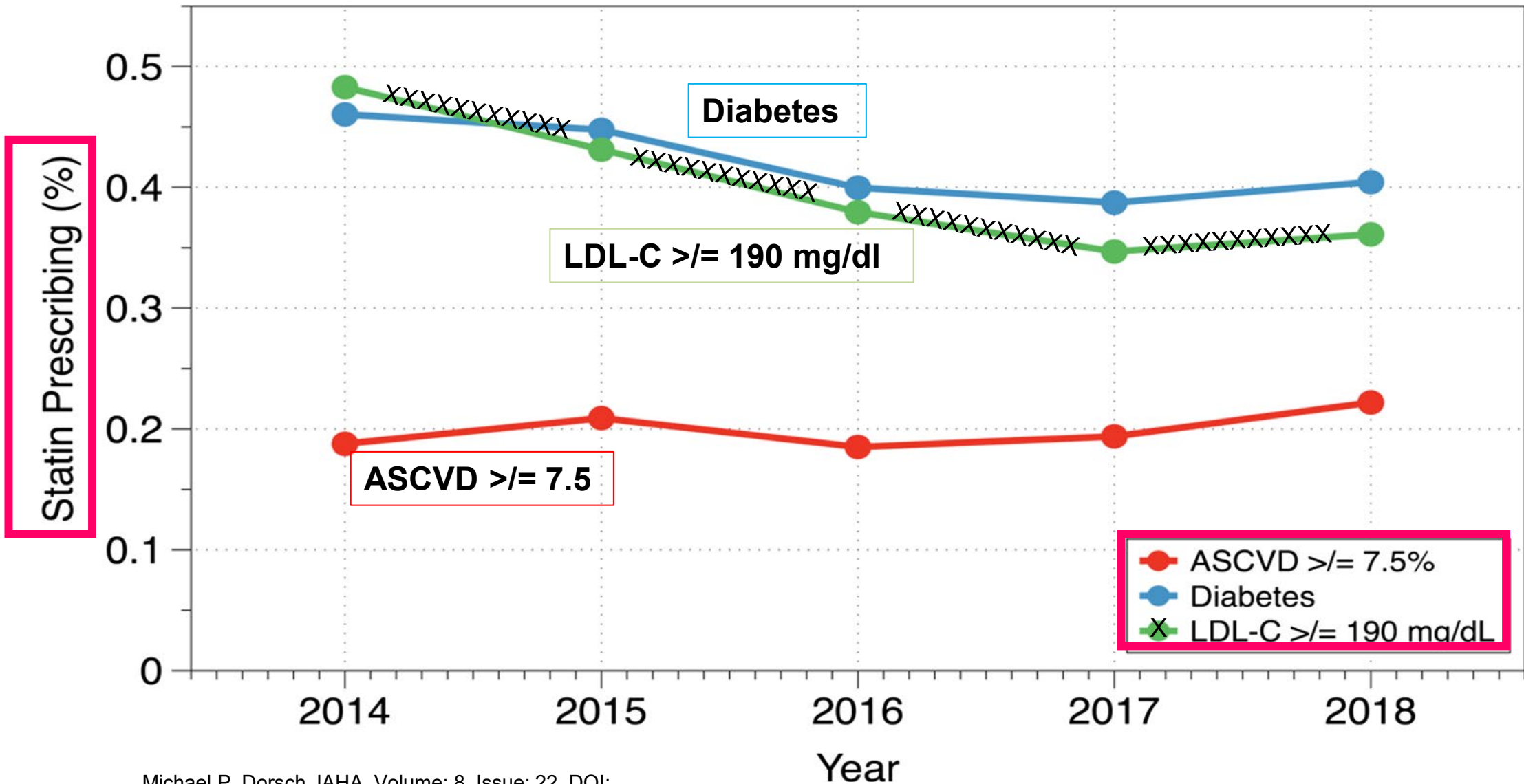
Reductions in 2020 US life expectancy due to COVID-19 and the disproportionate impact on the Black and Latino populations

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^aLeonard Davis School of Gerontology, University of Southern California, Los Angeles, CA 90089; and ^bOffice of Population Research, Princeton University, Princeton, NJ 08544

Statin Therapy Lowers Coronary Events



Plot of Statin Prescribing over Time by Benefit Group



Effects of Race on Statin Prescribing:

Primary Prevention With High ASCVD Risk in a Large Healthcare System

n=9,653

Black adults less likely prescribed statins with DM and ASCVD \geq 7.5% vs. Whites adults.

All Statin Benefit

Black

Asian

Other

Diabetes

Black

Asian

Other

ASCVD Risk \geq 7.5%

Black

Asian

Other

Odds Ratio (95% CI)

0.58 (0.49,0.69)

1.09 (0.89,1.33)

1.33 (0.97,1.81)

0.64 (0.49,0.82)

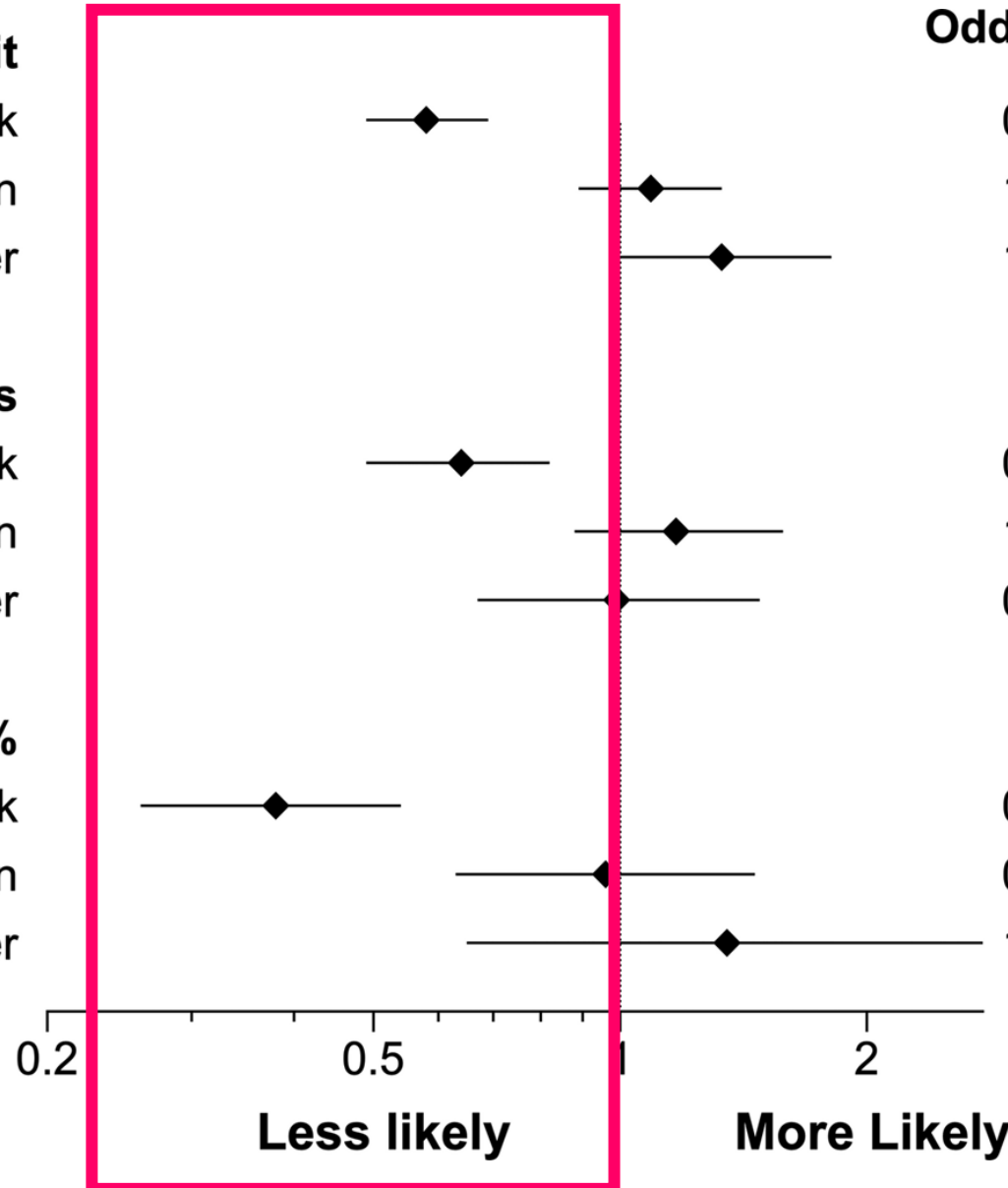
1.17 (0.88,1.58)

0.99 (0.67,1.48)

0.38 (0.26,0.54)

0.96 (0.63,1.46)

1.35 (0.65,2.77)



African Americans: Disparities in HTN and CVD

➔ Prevalence of HTN among highest in world ≈55% Black adults

➔ Higher rates of more severe HBP and develops earlier in life.

- Historical and systemic factors play a major role in disparities
- Adverse SDOH e.g., patient-clinician communication; low SES
- Lack of access to medication, and
- Distrust of health care professionals based on historical discrimination play critical role in nonadherence to anti-HTN medications.

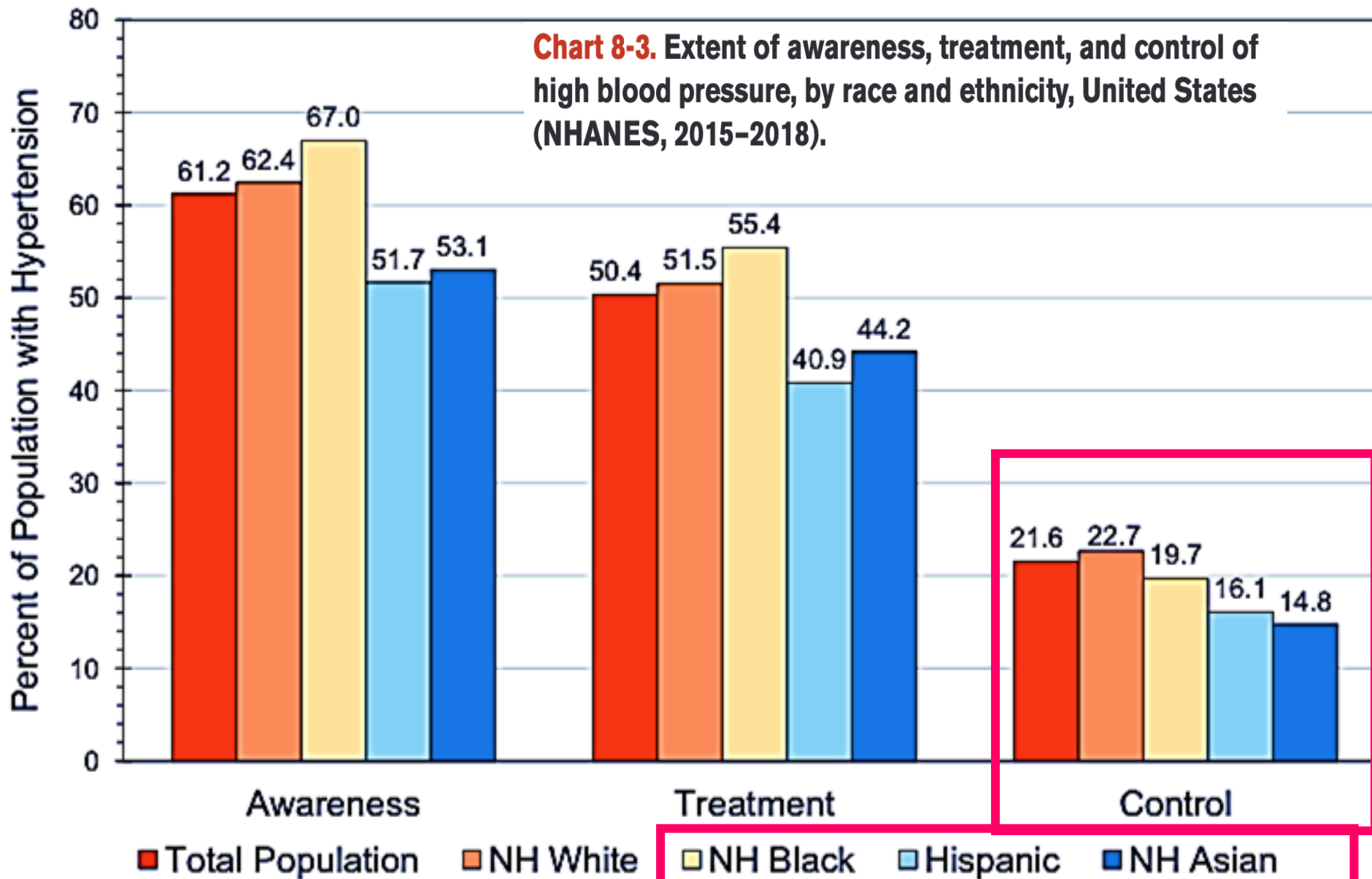
Ferdinand KC, ET AL. Disparities in hypertension and cardiovascular disease in blacks: The critical role of medication adherence. *J Clin Hypertens (Greenwich)*. 2017 Oct;19(10):1015-1024. doi: 10.1111/jch.13089. Epub 2017 Aug 30. PMID: 28856834; PMCID: PMC5638710

<https://www.heart.org/en/health-topics/high-blood-pressure/why-high-blood-pressure-is-a-silent-killer/high-blood-pressure-and-african-americans>

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
Hypertension			
Stage 1	130–139 mm Hg	or	80–89 mm Hg
Stage 2	≥140 mm Hg	or	≥90 mm Hg

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.



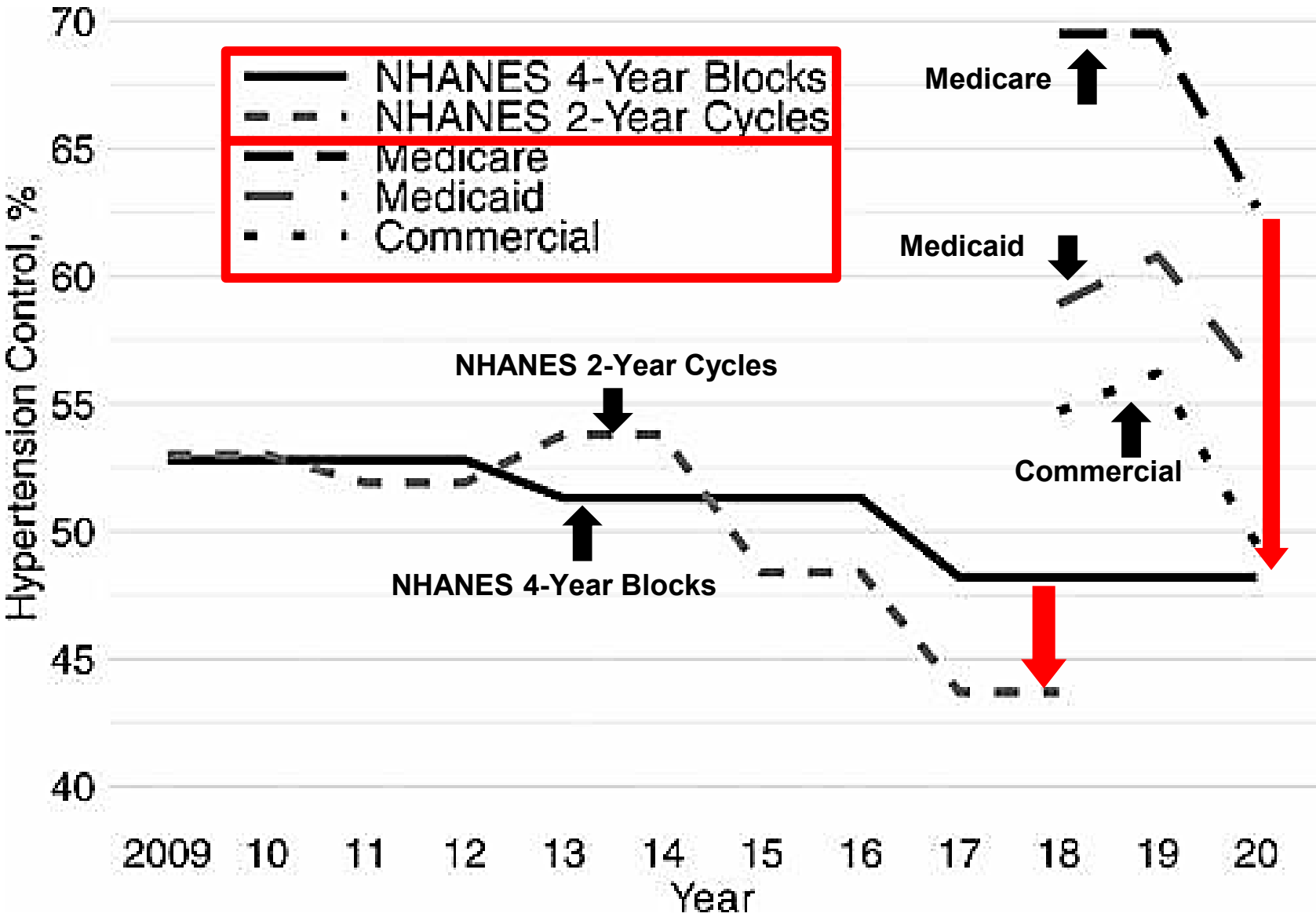
Leftmost Column:
Total population
Second Column
from the Left:
NH White
Third Column:
NH Black
Fourth Column:
Hispanic
Fifth Column:
NH Asian



EDITORIAL

Hypertension Control Among US Adults, 2009 to 2012
Through 2017 to 2020, and the Impact of COVID-19

HTN control changes: NHANES
and 3 health plans-
Commercial, Medicaid, and
Medicare



2017 ACC/AHA HBP Guideline

Out-of-Office and Self-Monitoring of BP

COR	LOE	Recommendation for Out-of-Office and Self-Monitoring of BP
I	<u>A^{SR}</u>	<p><u>Out-of-office</u> BP measurements are recommended to <u>confirm the diagnosis</u> of hypertension and for <u>titration</u> of BP-lowering medication, in conjunction with <u>telehealth</u> counseling or clinical interventions.</p> <p>SR indicates systematic review.</p>

Table 8 2017 ACC-AHA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults; *Hypertension*; JACC Nov 2017

Follow-Up After Initial BP Evaluation: Adults

COR	LOE	Recommendations for Follow-Up After Initial BP Elevation
I	B-R	Elevated BP or stage 1 HTN : estimated 10-year ASCVD risk <10% managed with nonpharmacological therapy and repeat BP evaluation within 3 to 6 months.
I	B-R	Stage 1 HTN: estimated 10-year ASCVD risk of $\geq 10\%$ should manage initially with combination of nonpharmacological and anti-HTN drug therapy and repeat BP evaluation in 1 month.
I	B-R	Stage 2 HTN: evaluated by or referred to a primary care within 1 month of initial diagnosis, have combination of nonpharm. and anti-HTN drug therapy (with 2 agents of different classes) initiated, and repeat BP evaluation in 1 month.

Follow-Up After Initiating Antihypertensive Drug Therapy

COR	LOE	Recommendation for Follow-Up After Initiating Antihypertensive Drug Therapy
I	B-R	Adults initiating a new or adjusted drug regimen for HTN follow-up evaluation of adherence and response to treatment at monthly intervals until control is achieved.




Racial and Ethnic Differences in Treatment

COR	LOE	Recommendations for Race and Ethnicity
I	C-LD	Two or more anti-HTN medications are recommended to achieve a BP target of less than 130/80 mm Hg in most adults with HTN, especially in black adults with HTN.


Medicaid and Medicaid Managed Care Organizations Coverage of Fixed Dose Combination Antihypertensive Medications

Massachusetts State Summary

Data as of 3/22/2022

Key:  = Preferred /Tier 1  = Non-Preferred  = Not Included

Fixed Dose Combination Medication ¹	Medicaid/Medicaid Managed Care Organization (MCO) Plans					
	Be Healthy Partnership	BMC HealthNet Plan	Fallon Health	MassHealth	My Care Family	Tufts Health Together
ACE Inhibitor + thiazide diuretic						
Lisinopril/hydrochlorothiazide (Zestoretic)						
Quinapril/hydrochlorothiazide (Accuretic)						
Benazepril/hydrochlorothiazide (Lotensin HCT)						
Enalapril/hydrochlorothiazide (Vaseretic)						
Fosinopril/hydrochlorothiazide (Monopril HCT)						
Moexipril/hydrochlorothiazide (Uniretic)						
ARBs + thiazide diuretic						
Irbesartan/hydrochlorothiazide (Avalide)						
Losartan/hydrochlorothiazide (Hyzaar)						
Valsartan/hydrochlorothiazide (Diovan HCT)						
Olmesartan/hydrochlorothiazide (Benicar HCT)					†	
Telmisartan/hydrochlorothiazide (Micardis HCT)	†				†	‡
Candesartan/hydrochlorothiazide (Atacand HCT)	†	†		‡	†	‡
Azilsartan/chlorthalidone (Edarbyclor)						
ACE Inhibitor + calcium channel blocker						
Benazepril/amlodipine (Lotrel)						
Trandolapril/verapamil (Tarka)				‡		
Perindopril/amlodipine (Prestalia)		†				
ARB + calcium channel blocker						
Olmesartan/amlodipine (Azor)		†				‡
Valsartan/amlodipine (Exforge)						
Telmisartan/amlodipine (Vydura)	†	†		‡		



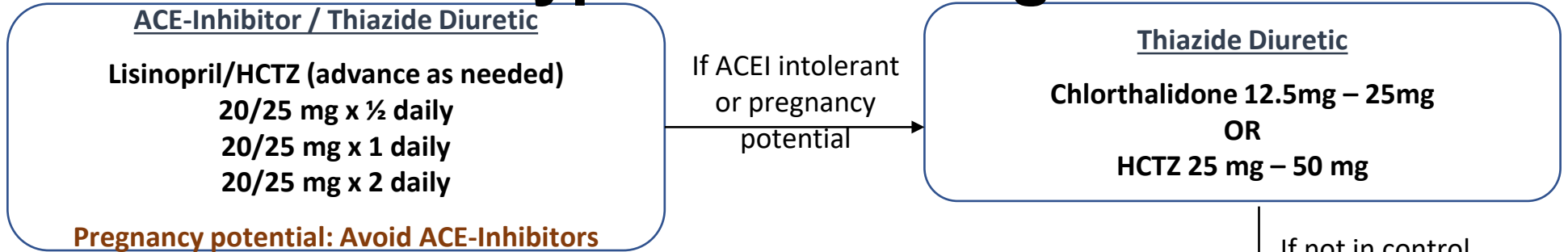
Fixed-Dose Combination Antihypertensive Medication Coverage

By State Medicaid and Medicaid Managed Care Organizations

June 2022

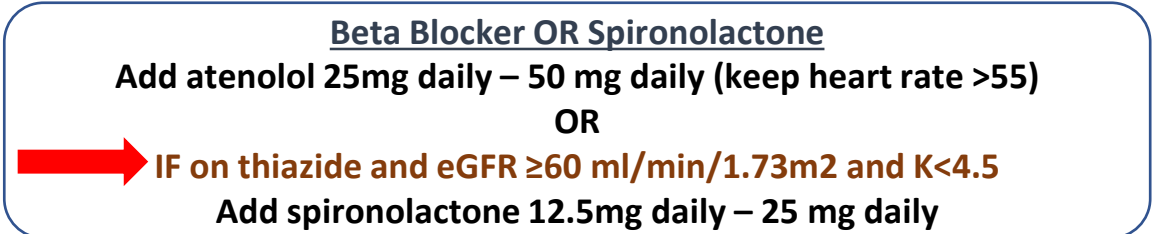
<https://millionhearts.hhs.gov/files/FDC-Analysis-50States-DC-508.pdf>

Kaiser Permanente Hypertension Algorithm



Blood Pressure (BP) Goals:
 ≤ 139/89 mmHg – uncomplicated hypertension
 ≤ 129/79 mmHg – Diabetes or CKD stages 1-3, CVA, TIA

NNT CVA = 63
 NNT MI = 86
NNT CVA or MI = 36



- If not in control ↓
- Consider medication non-adherence
 - Consider interfering agents (e.g., NSAIDS, excess alcohol)
 - Consider white coat effect. Consider BP checks by medical assistant (e.g., two checks with 2 readings each, 1week apart)
 - Consider discontinuing lisinopril/HCTZ and changing to chlorthalidone 25mg plus lisinopril 40 mg daily
 - Consider additional agents (hydralazine, terazosin, reserpine, minoxidil)
 - Consider stopping atenolol and adding diltiazem to amlodipine, keeping heart rate >55
 - **Avoid using clonidine, verapamil, or diltiazem together with a beta blocker. These heart-rate slowing drug combinations may cause symptomatic bradycardia over time**
 - Consider secondary etiologies
 - Consider consultation with a hypertension specialist

CARDIOLOGY NEWS

Barbershop-Based Care Dramatically Trims Blood Pressure

Bridget M. Kuehn

Pharmacist-delivered care for hypertension in barbershops led to dramatic reductions in blood pressure in black men, according to study results presented at the American College of Cardiology's 67th Annual Scientific Session.

The cluster-randomized trial, which was simultaneously published in the *New England Journal of Medicine*, enrolled 319 black men with a blood pressure of ≥ 140 mmHg at 52 barbershops in Los Angeles County. Men in the intervention group received monthly monitoring and medication management from specially trained



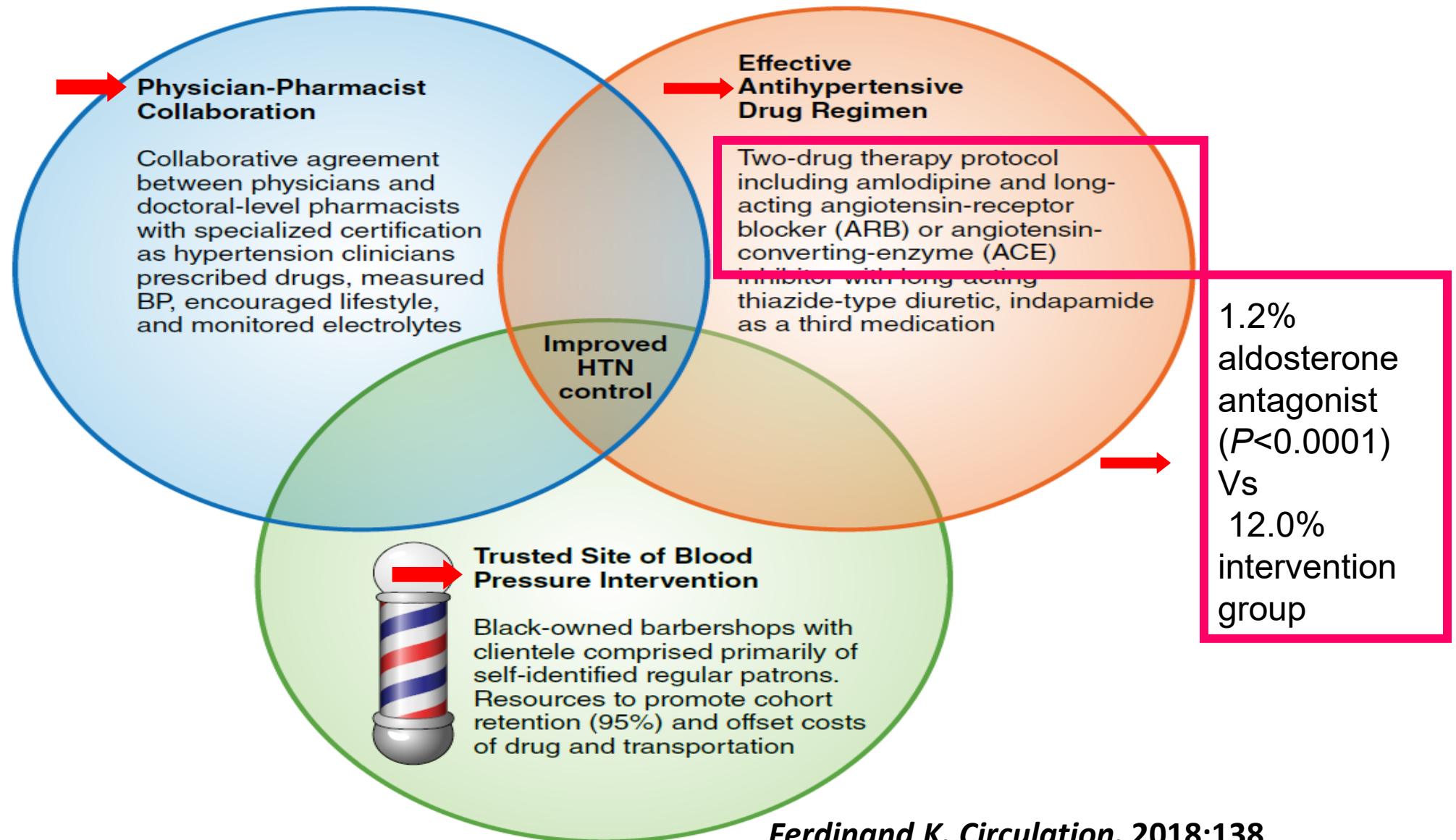
Circulation. 2018;137:1861–1862. April 24, 2018

BP Reduction in LA Black Barbershops

Table 2. Primary and Secondary Blood-Pressure Outcomes.*

Outcome	Intervention Group (N=132)	Control Group (N=171)	Intervention Effect	P Value†
Blood pressure				
Systolic blood pressure — mm Hg‡				
At baseline	152.8±10.3	154.6±12.0		
At 6 mo	125.8±11.0	145.4±15.2		
Change	-27.0±13.7	-9.3±16.0	-21.6 (-28.4 to -14.7)§	<0.001
Diastolic blood pressure — mm Hg				
At baseline	92.2±11.5	89.8±11.2		
At 6 mo	74.7±8.3	85.5±12.0		
Change	-17.5±11.0	-4.3±11.8	-14.9 (-19.6 to -10.3)§	<0.001
Hypertension control at 6 mo — no. (%)				
Blood pressure <140/90 mm Hg	118 (89.4)	55 (32.2)	3.4 (2.5 to 4.6)¶	<0.001
Blood pressure <135/85 mm Hg	109 (82.6)	32 (18.7)	5.5 (2.6 to 11.7)¶	<0.001
Blood pressure <130/80 mm Hg	84 (63.6)	20 (11.7)	5.7 (2.5 to 12.8)¶	<0.001

Positive Components of the LABBPS Intervention



Strategies to Improve Hypertension Treatment and Control

- Adherence strategies
 - Once daily dosing
 - Combination pills
- Strategies to promote lifestyle modification
- Team-based care
 - Health professionals: physicians, nurses, pharmacists
 - Patient
 - Staff: office staff and community health workers
 - Others: spouse, relatives, friends
- Use of EHR and Patient Registries
- Telehealth strategies
- Performance measures and Quality Improvement initiatives
- Financial incentives

ORIGINAL ARTICLE

Clinic-Based Strategies to Reach United States Million Hearts 2022 Blood Pressure Control Goals

A Simulation Study

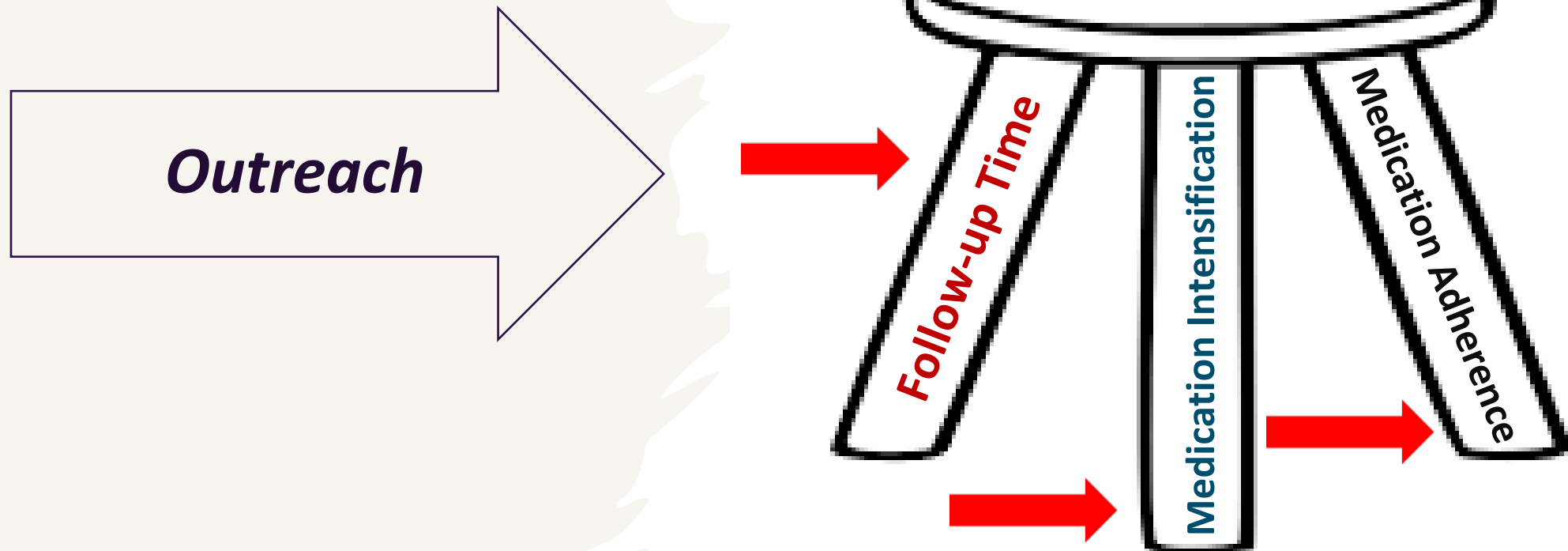
BACKGROUND: The Centers for Disease Control and Prevention's Million Hearts initiative includes an ambitious $\geq 80\%$ blood pressure control goal in US adults with hypertension by 2022. We used the validated Blood Pressure Control Model to quantify changes in clinic-based hypertension

Brandon K. Bellows,
PharmD, MS
Natalia Ruiz-Negrón,
PharmD

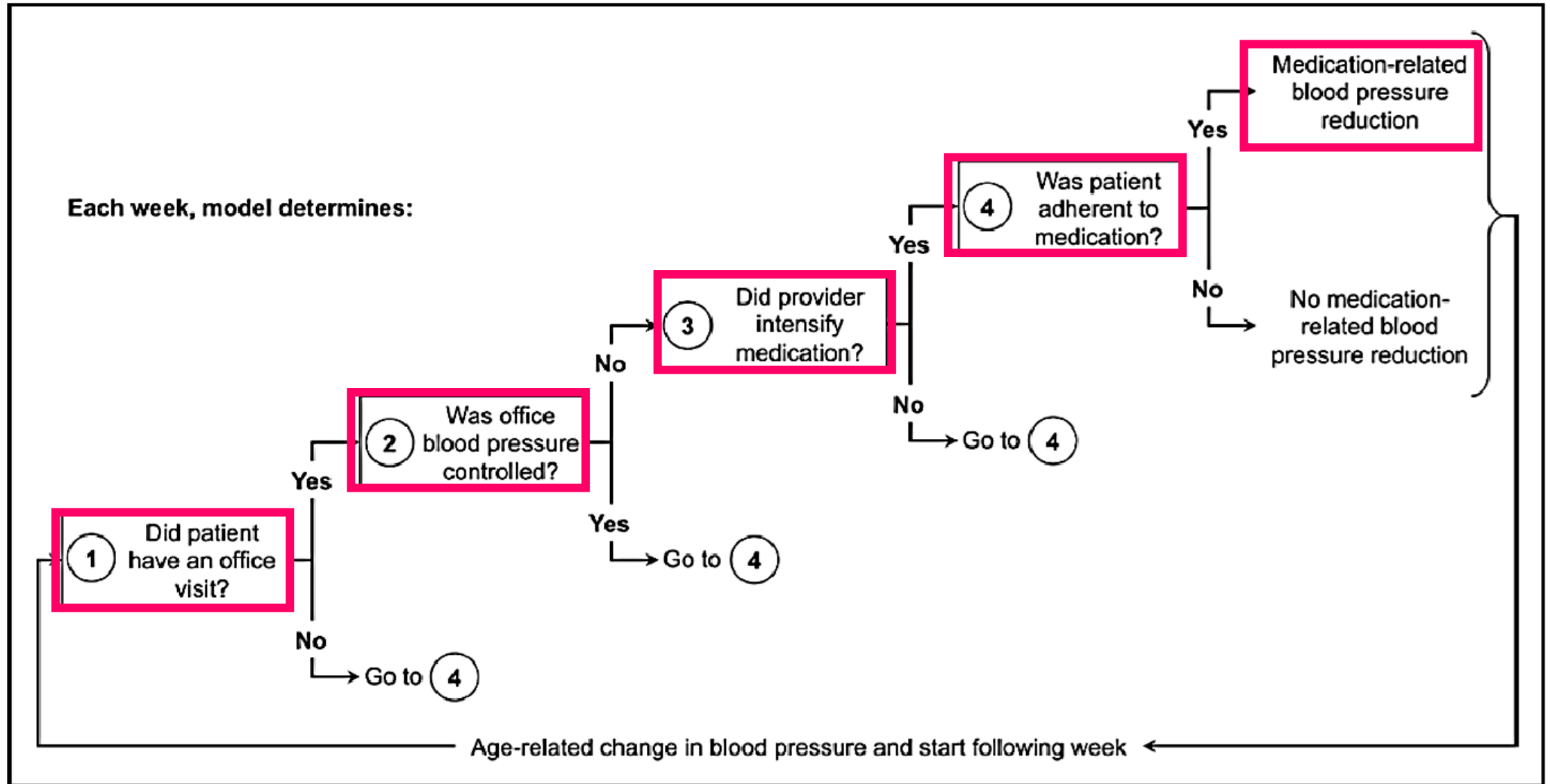
Bellows BK, Ruiz-Negrón N, Bibbins-Domingo K, King JB, Pletcher MJ, Moran AE, Fontil V. Clinic-Based Strategies to Reach United States Million Hearts 2022 Blood Pressure Control Goals. *Circ Cardiovasc Qual Outcomes*. 2019 Jun;12(6):e005624. doi: 10.1161/CIRCOUTCOMES.118.005624. Epub 2019 Jun 5. PMID: 31163981; PMCID: PMC6768426.

The Three Legs on the Stool to Achieve BP Control

- Achieving Million Hearts BP goal by 2022 simultaneously
- 78.1% BP U.S. overall HTN control



Structure of the Blood Pressure Control Mode



6 STEPS TO IMPROVING PATIENT UNDERSTANDING

- 1. Limit amount of information provided at each visit
- 2. Slow down
- 3. Avoid medical jargon
- 4. Use pictures or models to explain important concepts
- 5. Assure understanding with “show-me” technique
- 6. Encourage patients to ask questions



What Can You Do?

Thank you!

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