Possibilities: Achieving Health Equity

North Carolina Primary Care Conference
June 6, 2024

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Chief Medical Officer for Prevention
American Heart Association

Disclosure:

Principal Investigator,

National Hypertension Control Initiative.

American Heart Association.

OMH U.S. Department of Health and Human Services Office of Minority Health

HRSA Health Resources & Services Administration

This project is supported by cooperative agreements (CPIMP211227 and CPIMP211228) with the Office of Minority Health (OMH) of the U.S. Department of Health and Human Services (HHS), as part of a financial assistance award totaling $14.6 million in partnership with the Health Resources and Services Administration (HRSA). The contents do not necessarily represent the official views of, nor an endorsement by OMH/OASH/HHS or the U.S. Government.

For more information, please visit https://www.minorityhealth.hhs.gov

American Heart Association.

Positionality/Intersectionality Statement:

First generation US citizen

Family medicine residency trained physician

Public health trained physician

Session Description

The session will:

1. Identify two of the five leading causes of death in North Carolina - diseases of the heart and cerebrovascular diseases;
2. Identify eight health factors that contribute to cardiovascular health;
3. Discuss the prevalence of hypertension and blood pressure control by sociodemographic factors;
4. Discuss the value of access to quality primary care;
5. Describe 2 hypertension control programs that use a quality improvement approach to achieve better blood pressure control.

Session Learning Objectives

After this session, the participant will be able to:

- Name, at least, 5 of 8 health factors associated with cardiovascular health
- Discuss the relationship between access to medical care and blood pressure control
- Be able to discuss the American Medical Association MAP framework and its 3 components:
- Measure accurately
- Act rapidly
- Partner with patients

"I have the audacity to believe that peoples everywhere can have three meals a day for their bodies, education and culture for their minds, and dignity, equality, and freedom for their spirits."

Martin Luther King, Jr.
Nobel Peace Prize acceptance speech, Oslo, Norway, 1964

Professional Path

Early Adulthood

- Boston University
- Duke University
- Dominican Republic – high school math teacher
- University of Texas Southwestern Medical School
    - Summer after year 2 – Brownsville Community Health Center - FQHC

Professional Path

Middle adulthood

- UT Health Science San Antonio Family Medicine residency – why I chose San Antonio
- UT School of Public Health
- Austin/Travis County Health and Human Services Department
  - ATCHHSD FQHC
- St. David's Health Care System
- Seton Topfer Community Clinic

Professional Path

Mature Adulthood

- Texas Department of Health/Texas Department of State Health Services
  - Primary Care Office FQHC Incubator
- UT SPH Center for Health Policy
- Blue Cross Blue Shield of Texas
- American Heart Association
  - NHCI – 350 FQHCs

American Heart Association.

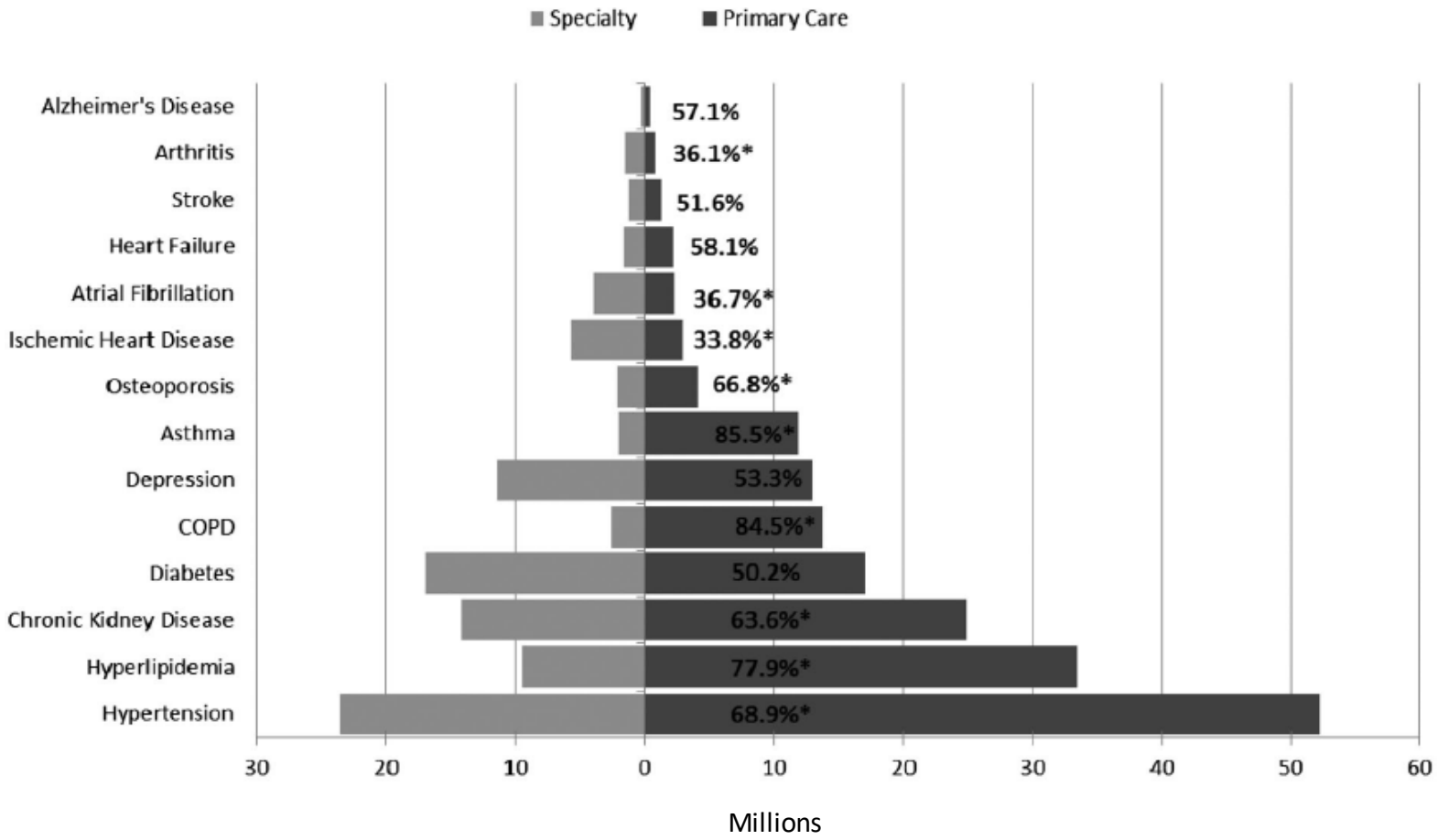
The Present

North Carolina

- 39 Community Health Centers and 497 delivery sites.
- In 2021, clinicians at NC CHCs treated more than 840,000 patients in more than 2.2 million visits for primary care as well as dental, vision, mental health, and substance abuse.

https://www.nachc.org/wp-content/uploads/2023/06/CHC-Economic-Impact-Report_NorthCarolina.pdf; accessed 052624.

Number and percentage of outpatient chronic condition visits by physician type in the past year: 2008 National Ambulatory Medical Care Survey



Sharma et al. Am Board Fam Med 2014;27:11–12

Access to Clinical Care Factor - 20%: Primary Care matters.

Increase of 1 PCP/10,000 in Primary Care Services Areas

- 15.1 fewer deaths per 100,000
- 39.7 fewer ACSC* hospitalizations per 100,000

Increase of 1 Medicare PC FTE/10,000

- 82.8 fewer deaths per 100,000
- 160.8 fewer hospitalizations per 100,000
- 712.3 fewer emergency room visits per 100,000

Chang et al, HSR, 2017

* Ambulatory care sensitive conditions

In 2020, the life expectancy in North Carolina was 76.1 years vs 77 years in the US overall.

Health of North Carolinians

Causes of Death (2022)

Rank	Cause	Number
1	Heart Diseases	22,710 (calculated)
2	Cancer	20,409
3	COVID-19	
4	Accidents	8,858
5	Stroke	6,189
6	Chronic Lower Respiratory Disease	5,280
7	Alzheimer's Disease	4,272
8	Diabetes mellitus	3,834
9	Kidney disease	2,169
10	Chronic Liver Disease/Cirrhosis	1,801

Source: https://www.cdc.gov/nchs/pressroom/states/northcarolina/nc.htm#lcod; Accessed 5/26/2024

Health of North Carolinians : America's Health Rankings (North Carolina – 2023)

Category	Actual value	Ranking
Clinical care		**32**
Uninsured	**9.3%**	**40**
Flu vaccination	**46.2%**	**23**
Dedicated health care provider	**82.1%**	**31**
Smoking	14.5%	27
Physical inactivity	23.1%	21
Fruit and vegetable consumption	6.2%	39
Insufficient sleep	34.1%	18
High speed internet	92.4%	30
Overall		**32**

Source: State Summaries North Carolina | 2023 Annual Report | AHR (americashealthrankings.org)

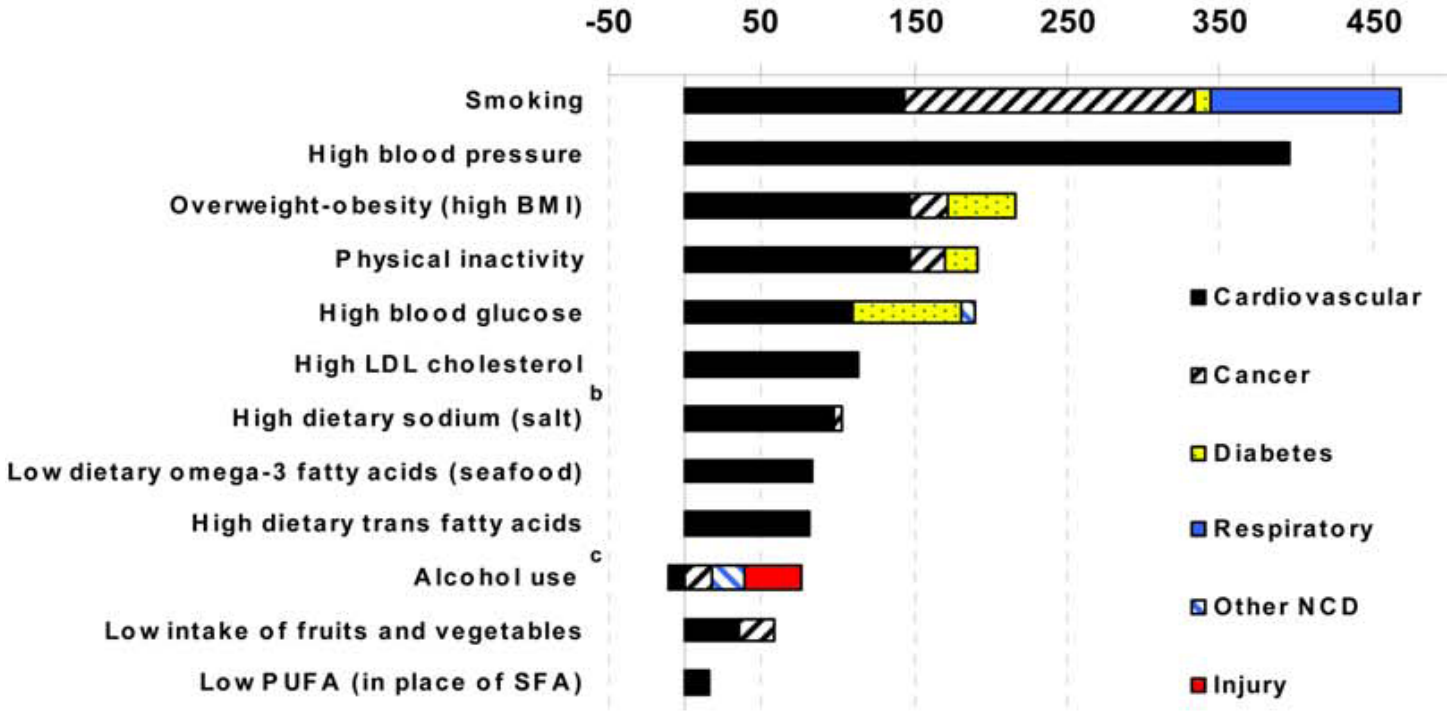
Race and Ethnicity of North Carolinians (2020)

Population Group	Percentage
All	100% (10,439,388)
Non-Hispanic white persons	61.7%
Non-Hispanic Black persons	20.6%
Asian and Pacific Islander persons	4.1%
Hispanic persons	10.7%

https://data.census.gov/all?q=North%20Carolina%20Race%20and%20Ethnicity ; accessed 5/26/24
https://aac.unc.edu/wp-content/uploads/sites/1305/2022/10/Dem-North_Carolina.pdf.; accessed 5/29/24

The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors

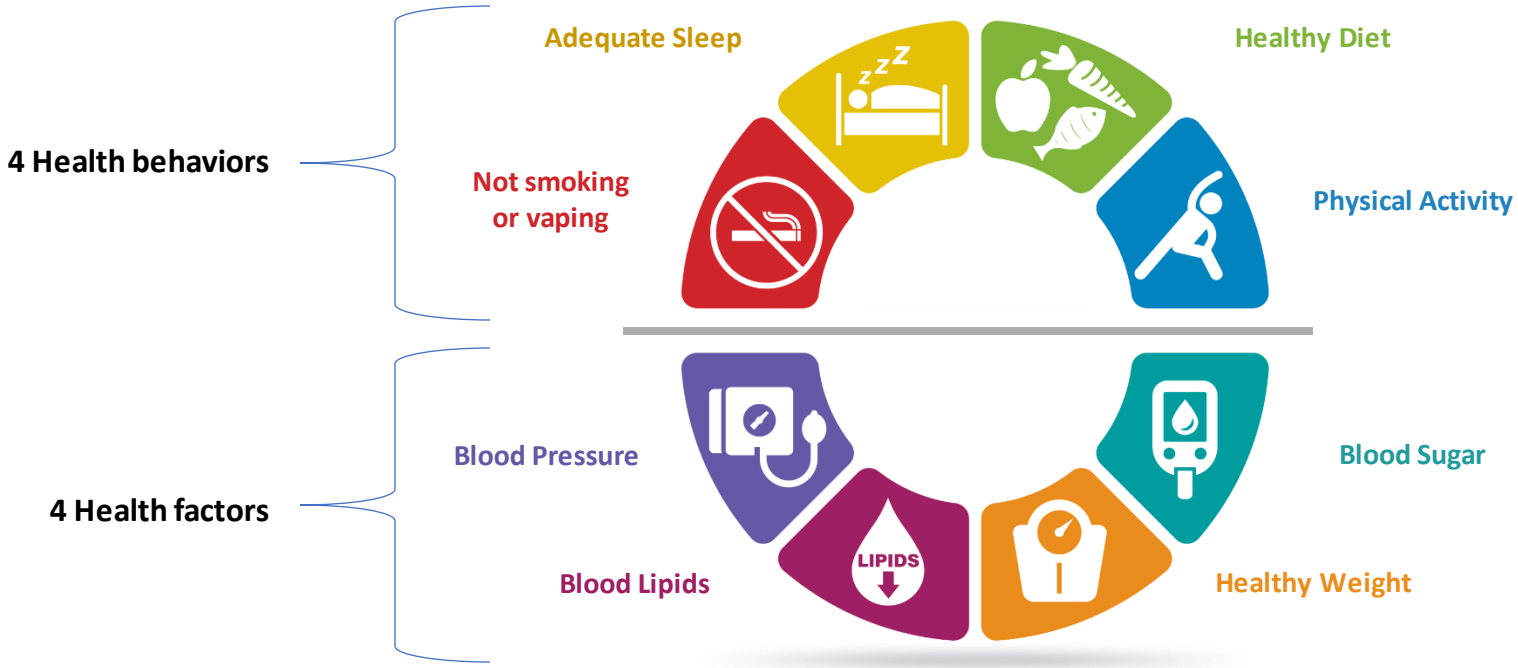
Deaths attributable to individual risk (thousands) in both sexes



Source: Danaei, 2009

Life's Essential 8

Life's Essential 8 consists of the following vital elements:



Source: Lloyd-Jones et al. 2022; *Circulation*

Ideal Cardiovascular Health Has Collateral Benefits

A high LS7 score (≥5 ideal metrics) is associated with lower risk for a range of disabling and costly disease conditions:

- Heart disease and stroke (Lloyd-Jones et al, 2010, Ford et al., 2012)
- Diabetes (Joseph et al, 2016)
- Depression (Kronish et al, 2012)
- Improved cognitive function (Reis et al, 2013)
- Incident cancer (Rasmussen-Torvik et al, 2013)
- Incident dementia (Gottesman et al, 2017)
- Healthcare costs in a young, ethnically diverse working population (Osondu et al 2017)
- Healthcare costs in Medicare population (Willis et al 2015)

Leading Risk Factors for CVD

Population Attributable Fraction (PAF)

Rank	Risk Factor	PAF (95% CI)
1	**Hypertension**	**22.3% (17.4-27.2)**
2	High non-HDL cholesterol	8.1% (3.1-13.2)
3	Household air pollution	6.9% (4.7-9.1)
4	Tobacco use	6.1% (4.5-7.6)
5	Poor diet	6.2% (2.8-9.5)
6	Low education	5.8% (2.8-8.8)
7	Abdominal obesity	5.7% (1.7-9.8)
8	Diabetes	5.1% (2.9-7.4)
9	Low grip strength	3.3% (0.9-5.7)
10	Low physical activity	1.5% (0.3-2.7)

Source: Yusuf et al., Lancet, 2020

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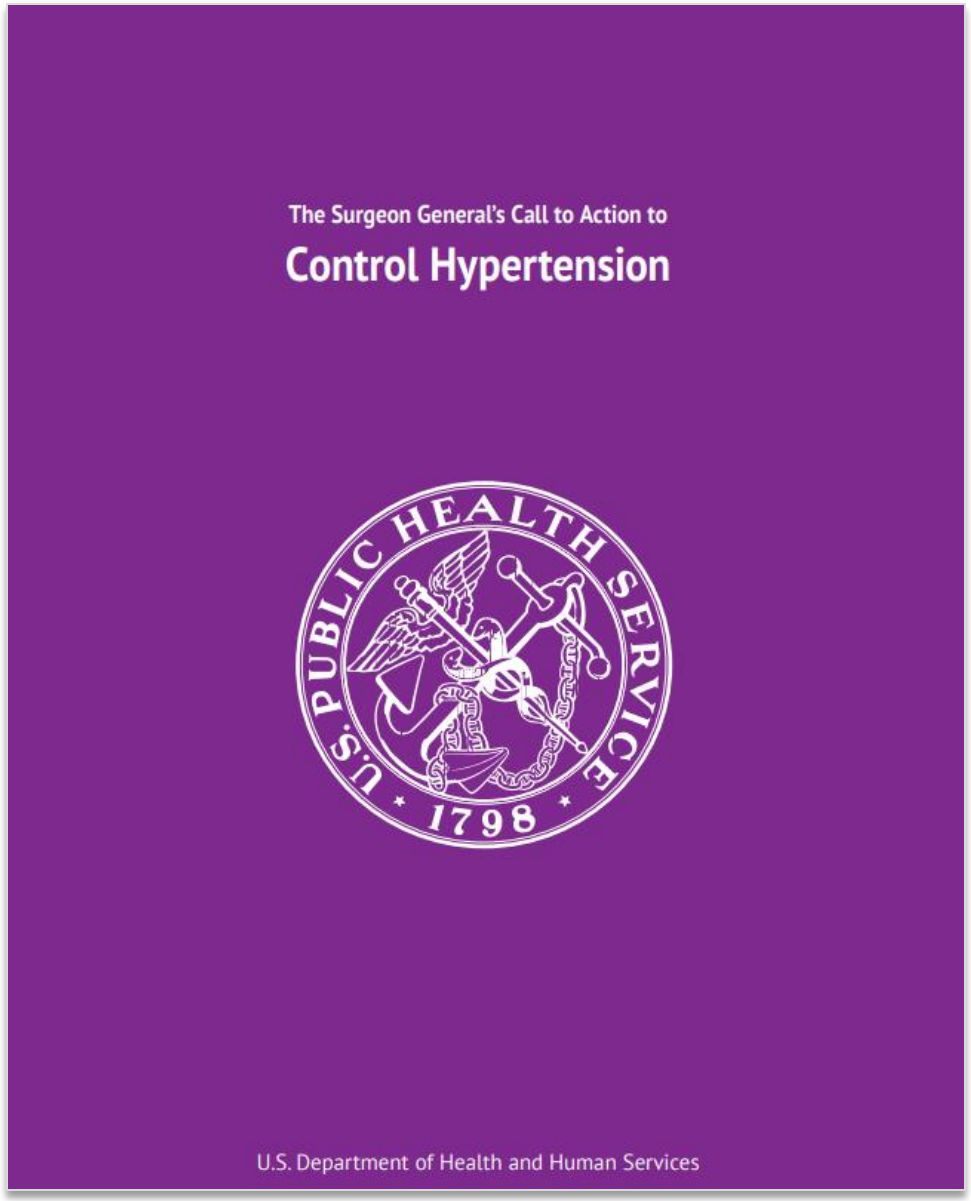
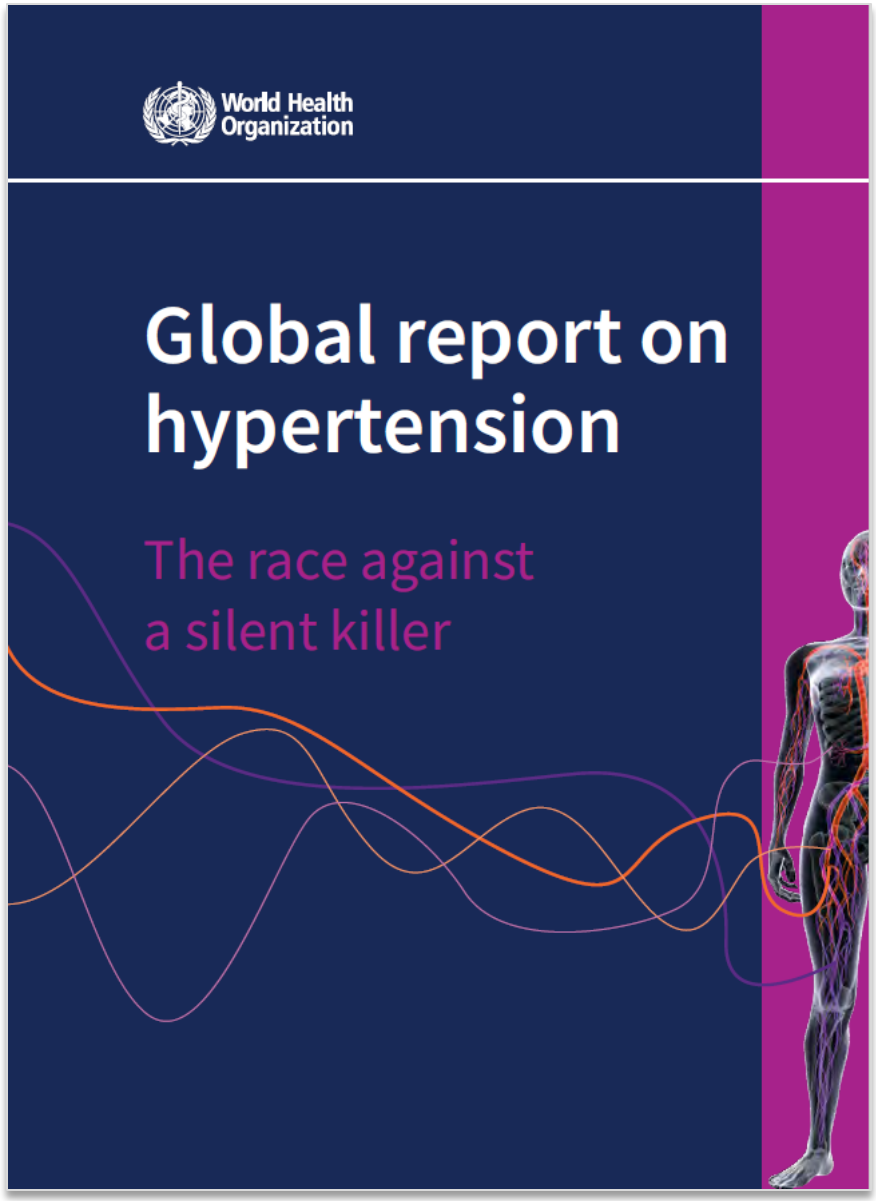




Blood Pressure Control among Adults with Hypertension in the US (2017-2018) Sociodemographic Factors

Characteristic	Control Rate (%)
45 – 64 years old	49.7
64-74 years old	51.7
≥ 75 years old	**37.3**
Female	48.5
Male	**45.0**
Non-Hispanic White	48.2
Non-Hispanic Black	**41.5**
Non-Hispanic Asian	**41.1**
Hispanic	**40.5**

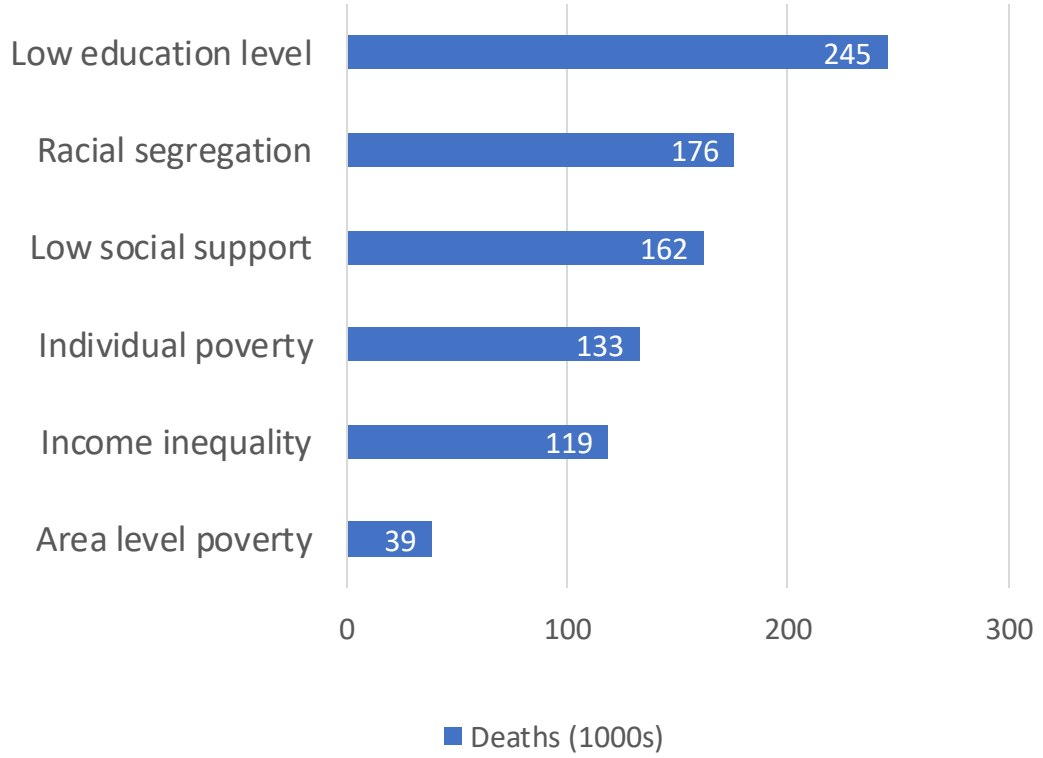
Source: Muntner, JAMA, 2020.

Blood Pressure Control among Adults with Hypertension in the US (2017-2018) Sociodemographic Factors

Characteristic	Control Rate (%)
Less than high school graduation	**40.5**
High school and some college	46.2
College graduation	48.0
< $20,000 annual household income	**39.4**
$20,000 - $44,999 annual household income	45.1
$45,000 - $74,999 annual household income	49.2
> $75,000 annual household income	50.2
Private health insurance	48.2
Medicare	53.4
Medicaid	41.1
Uninsured	**24.1**
Usual health care facility	48.4
No usual health care facility	**26.5**
No healthcare in past 12 months	**8.0**

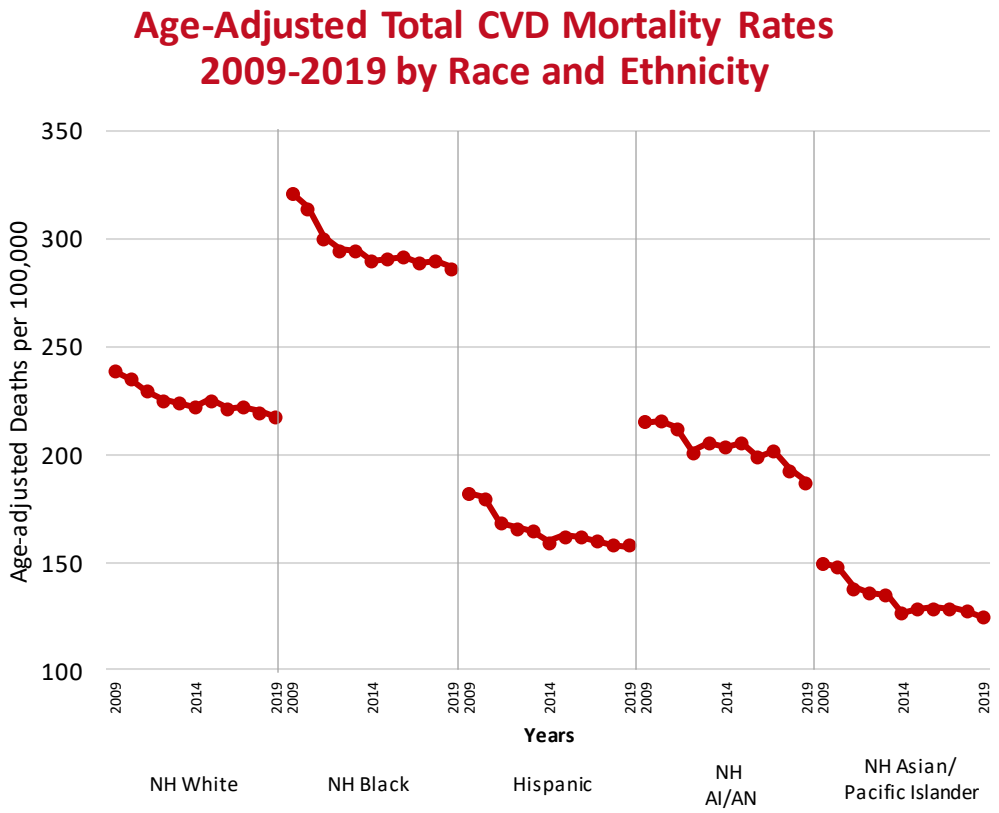
Source: Muntner, JAMA, 2020.

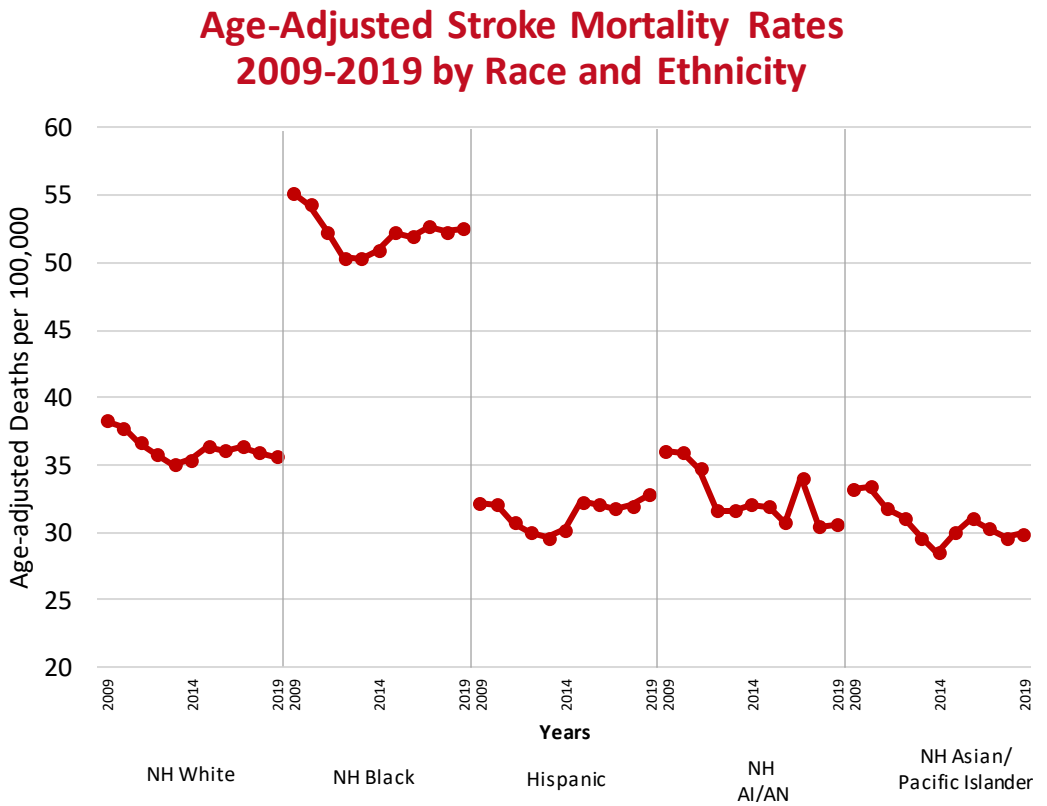
Relationship between Social Determinants and Mortality (2000)



Source: Galea et al, Estimated Deaths Attributable to Social Factors in the United States, AJPH, August 2011, Vol 101, No. 8.

Disparities in Mortality by Race/Ethnicity (Pre-COVID)





Source: CDC Wonder - NCVHS ICD-10: I00-I99, Q20-Q28

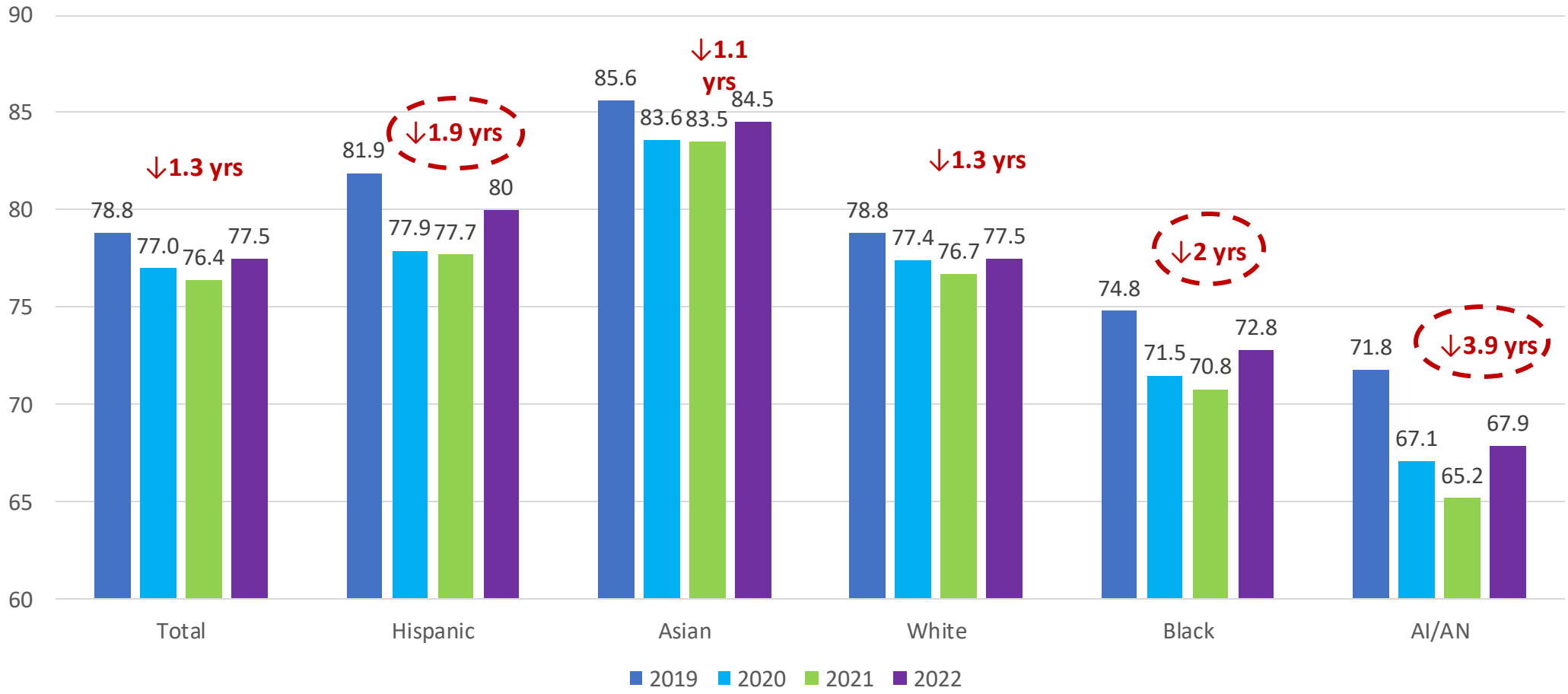
AHA Mission Statement

… to be a relentless force for a world of longer, healthier lives

American Heart Association.

The Pandemic

Life Expectancy Decrease (2019 – 2022)



Source: Provisional life expectancy estimates for 2020 (cdc.gov)
Vital Statistics Rapid Release, Number 023 (August 2022) (cdc.gov)
Vital Statistics Rapid Release, Number 31 (November 2023) (cdc.gov)

Circulation

AHA PRESIDENTIAL ADVISORY

Call to Action: Structural Racism as a Fundamental Driver of Health Disparities

A Presidential Advisory From the American Heart Association

ABSTRACT: Structural racism has been and remains a fundamental cause of persistent health disparities in the United States. The coronavirus disease 2019 (COVID-19) pandemic and the police killings of George Floyd, Breonna Taylor, and multiple others have been reminders that structural racism persists and restricts the opportunities for long, healthy lives of Black Americans and other historically disenfranchised groups. The American Heart Association has previously published statements addressing cardiovascular and cerebrovascular risk and disparities among racial and ethnic groups in the United States, but these statements have not adequately recognized structural racism as a fundamental cause of poor health and disparities in cardiovascular disease. This presidential advisory reviews the historical context, current state, and potential solutions to address structural racism in our country. Several principles emerge from our review: racism persists; racism is experienced; and the task of dismantling racism must belong to all of society. It cannot be accomplished by affected individuals alone. The path forward requires our commitment to transforming the conditions of historically marginalized communities, improving the quality of housing and neighborhood environments of these populations, advocating for policies that eliminate inequities in access to economic opportunities, quality education, and health care, and enhancing allyship among racial and ethnic groups. Future research on racism must be accelerated and should investigate the joint effects of multiple domains of racism (structural, interpersonal, cultural, anti-Black). The American Heart Association must look internally to correct its own shortcomings and advance antiracist policies and practices regarding science, public and professional education, and advocacy. With this advisory, the American Heart Association declares its unequivocal support of antiracist principles.

Keith Churchwell, MD, FAHA, Chair
Mitchell S.V. Elkind, MD, MS, FAHA
Regina M. Benjamin, MD, MBA
April P. Carson, PhD, MSPH, FAHA
Edward K. Chang, BS
Willie Lawrence, MD, FAHA
Andrew Mills, MPH
Tanya M. Odom, EdM
Carlos J. Rodriguez, MD, MPH, FAHA
Fatima Rodriguez, MD, MPH, FAHA
Eduardo Sanchez, MD, MPH
Anjail Z. Sharrief, MD, MPH, FAHA
Mario Sims, PhD, MS, FAHA
Olajide Williams, MD, MS
On behalf of the American Heart Association

Circulatio

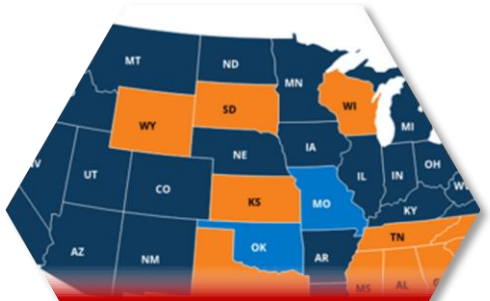
Source: Churchwell et al. 2020; *Circulation*

AHA's 10 Commitments

To Address the Drivers of Health Disparities including Social Determinants of Health and Structural Racism


Research


Community



Access to Care


Targeting Industry


Hypertension


Quality Initiatives


Workplace Roadmap


Health Professionals Learning Platform

Journals


AHA Workforce Diversity

HHS National Hypertension Control Initiative (NHCI)

HHS Purpose & Scope

- Improve hypertension control
- Focus on populations **disproportionately impacted by hypertension and COVID-19**
  - Black, Hispanic, American Indian / Alaskan Native populations
- Use culturally-sensitive and evidence-based interventions, including SMBP monitoring

Federally Qualified Heath Centers
(funded by HHS HRSA)

- Eligible with control rates <58.9% in 2019
- Goal of offering SMBP devices to majority of patients with uncontrolled BP
- Funded $60M for 350 community health centers over 3 years (2021-23)

American Heart Association
(funded by HHS HRSA/OMH)

- Provide technical assistance and training
- Support community outreach, patient/ public education, and evaluation
- Funded $32M over 3 years (2021-23)

Clinical Setting Strategy
AMA MAP™ Framework + SMBP

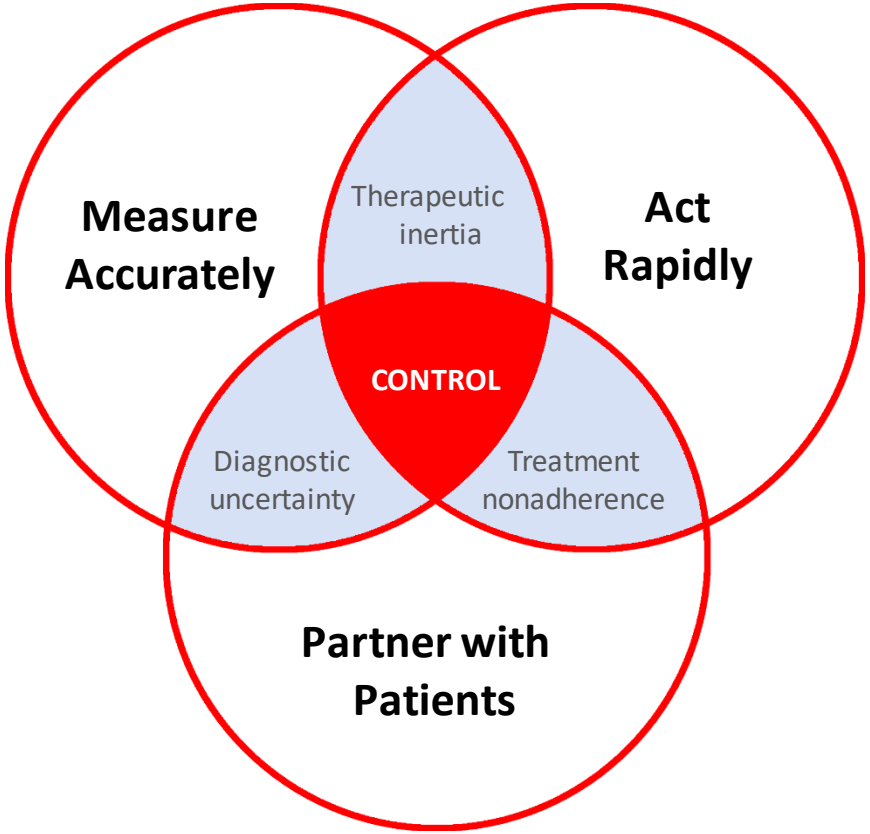
A clinical care focused quality improvement initiative to raise blood pressure control levels to 70% or better

- **MAP Framework**
- Good blood pressure measurement technique
- Use of algorithm
- Optimized activation of health team

M **Measure Accurately** every time to obtain accurate BPs → *reduced clinical uncertainty*

A **Act Rapidly** to diagnose and treat hypertension → *reduced diagnostic & therapeutic inertia*

P **Partner with patients** to activate patients to self-manage and *promote adherence to treatment*



North Carolina CHCs Participating in NHCI

Health Center Name	State	Grant Number
C.W. Williams Community Health Center, Inc., The	NC	H80CS00428
Greene County Health Care Incorporated	NC	H80CS00088
High Country Community Health	NC	H80CS24142
KINSTON COMMUNITY HEALTH CENTER, INC.	NC	H80CS00104
Metropolitan Community Health Services, Inc. (dba Agape Community Health Center)	NC	H80CS00864
Opportunities Industrialization Center, Inc.	NC	H80CS24162
PIEDMONT HEALTH SERVICES, INC.	NC	H80CS00086
ROBESON HEALTH CARE CORPORATION	NC	H80CS00107
United Health Centers Southside (dba United Health Centers)	NC	H80CS24143

American Heart Association.

How Have We Done?

CHC Data Collection – The Big 3

1) Blood Pressure Measurement Protocol

"Does your health center have a documented protocol, process, or a policy & procedure for blood pressure measurement for adults with hypertension?" [MEASURE]

% Responding "Yes"	
2022 Survey	2023 Survey
87%	89%

2) Blood Pressure Treatment Algorithm

Response to question "Does your health center use a BP treatment protocol?" [ACT]

% Responding "Yes"	
2022 Survey	2023 Survey
72%	77%

3) SMBP Patient Protocol

"Does your health center use a systematic approach (such as a patient onboarding protocol) to train patients in SMBP?" [PARTNER]

% Responding "Yes"	
2022 Survey	2023 Survey
89%	93%

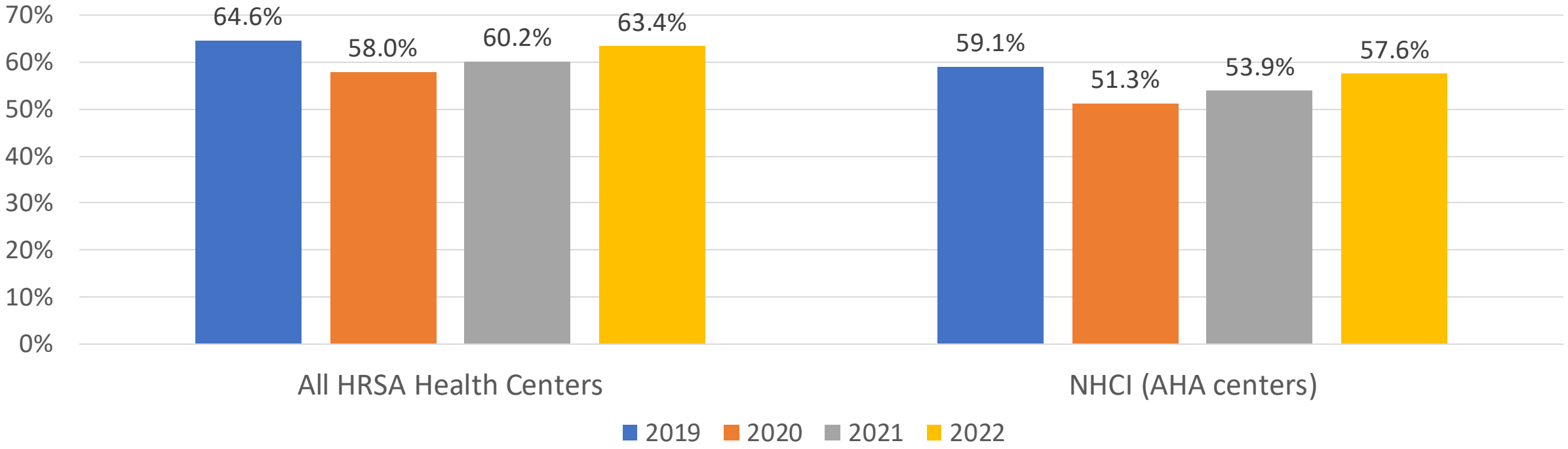
Note: Data included for 236 surveys

CHC Data Collection – Response Rates for 3 of 5 surveys

Table 1: Survey Response Rate by Year 2021-2023

	2021 Survey	2022 Survey	Oct 2023 Survey
Surveys Sent	350	343	343
Surveys Completed	260	263*	249
Response Rate	74%	77%	73%

Blood Pressure Control Results* (2019-2022)
All HRSA Centers, NHCI Centers**

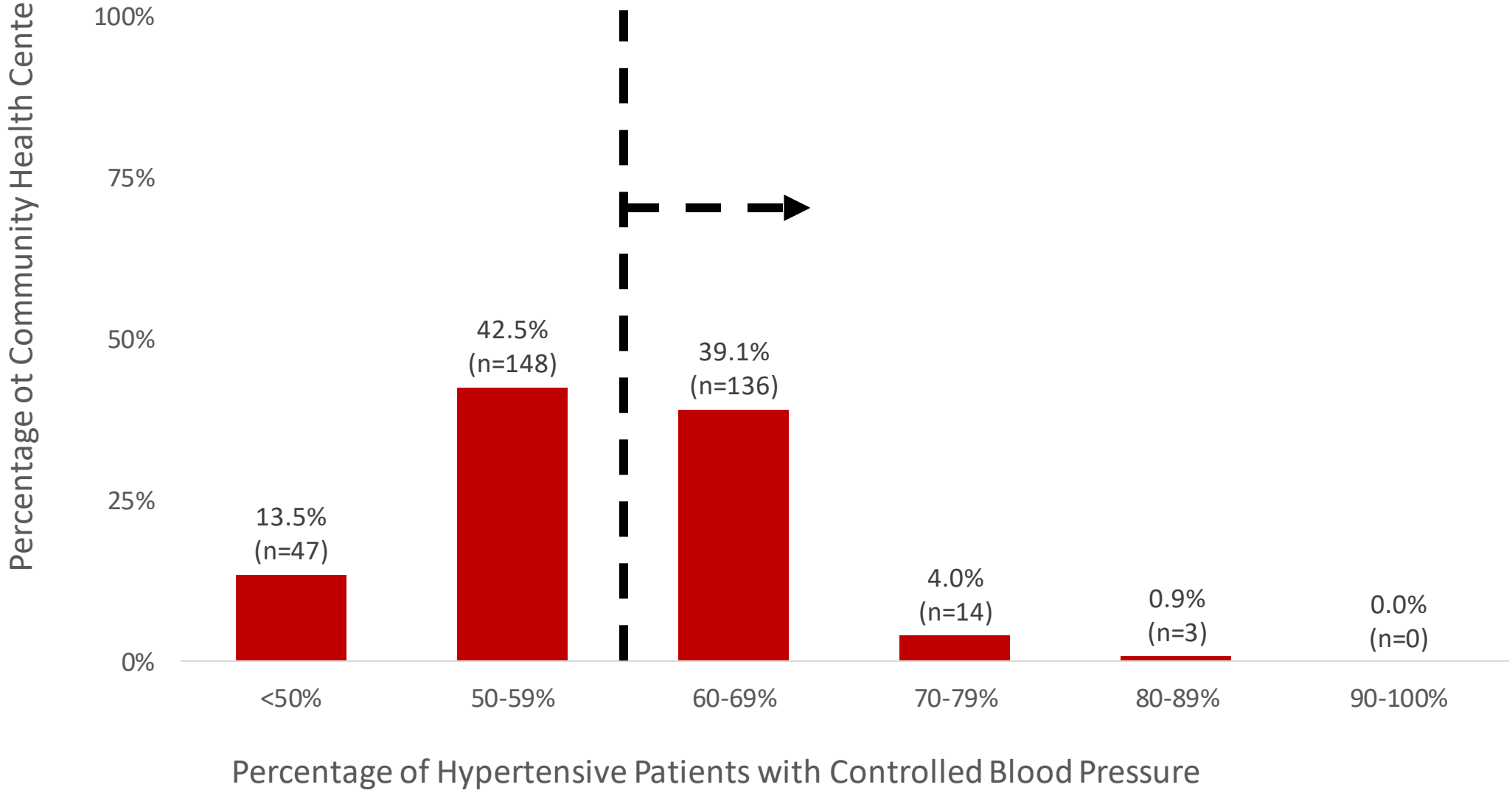


	Absolute Change *From 2020 - 2022*	Relative Change *From 2020 - 2022*
All HRSA Health Centers	5.4%	9.3%
NHCI (AHA centers)	6.3%	12.3%

*Data source UDS 2019-2022

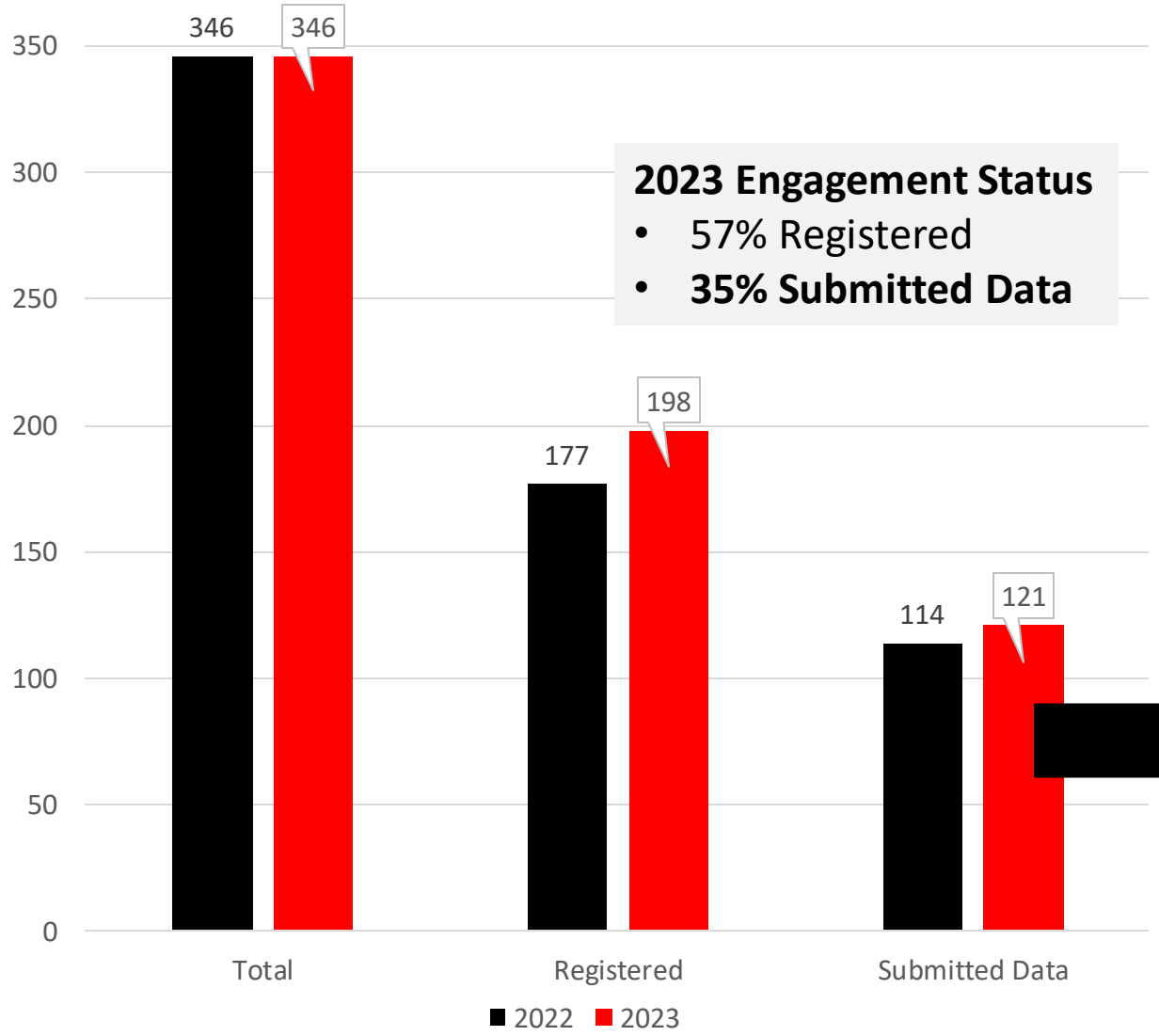
** 350 NHCI Centers with 2019 BP control rates <58.9% are receiving HRSA funding and AHA T/TA from 1/2021 – 12/2023.

Blood Pressure Control among NHCI Tier 1 Community Health Centers, 2022 (n=348)



Data source: UDS 2022

NHCI / Target: BP Engagement & Awards

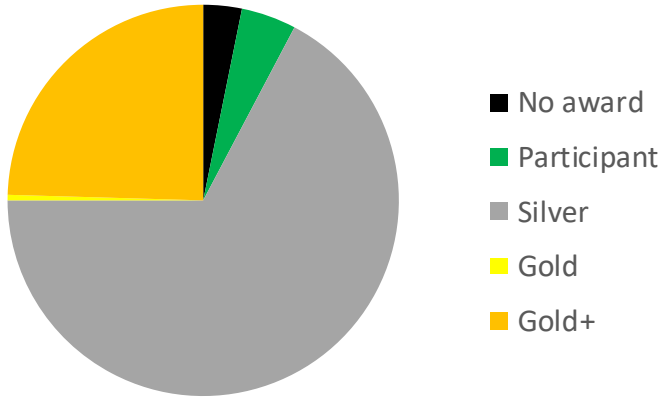


2023 Engagement Status

- 57% Registered
- **35% Submitted Data**

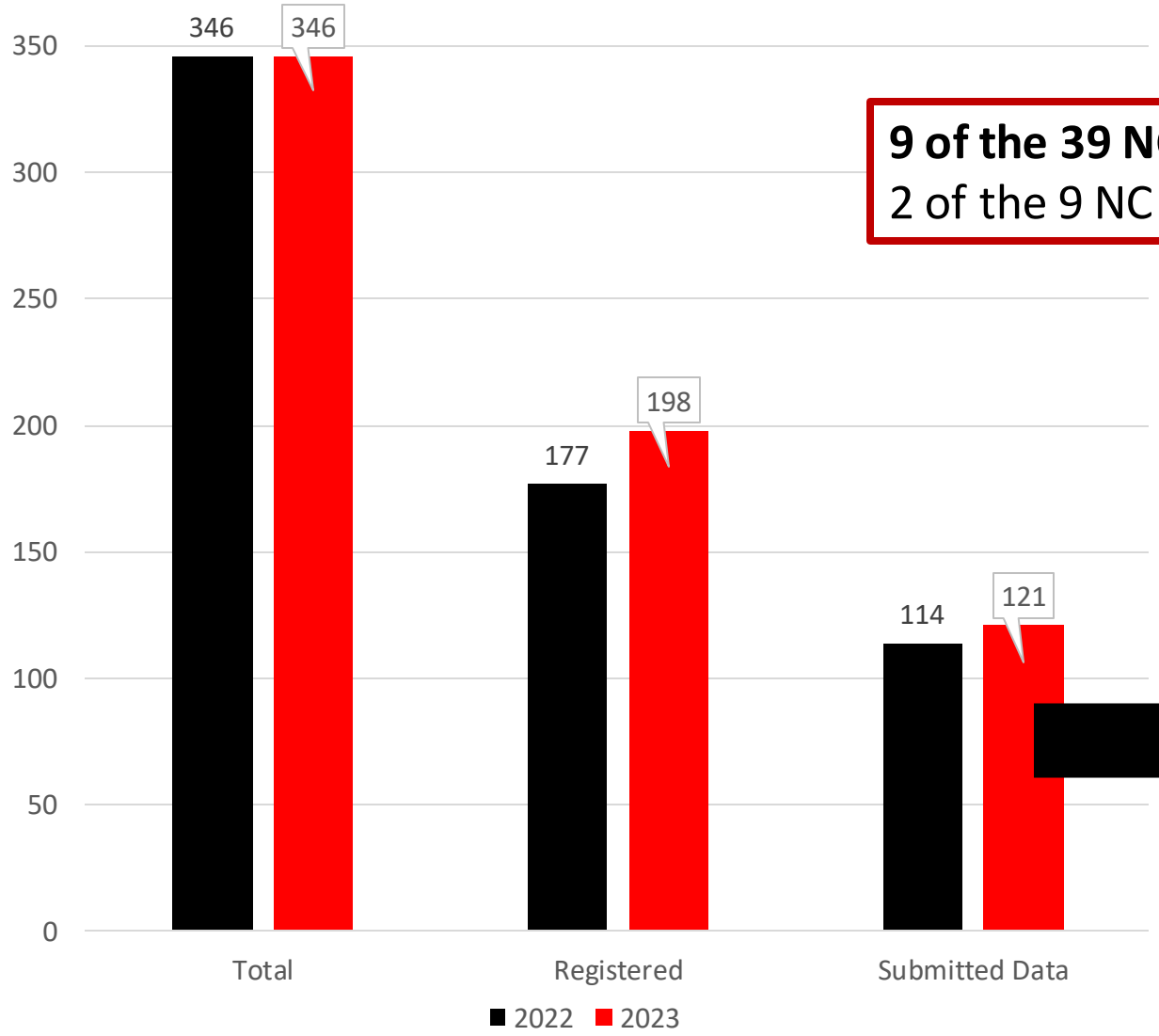
Award Status

- **25% Gold+**
- <1% Gold
- **67% Silver**
- 5% Participant
- 3% No award (multi-year participant)

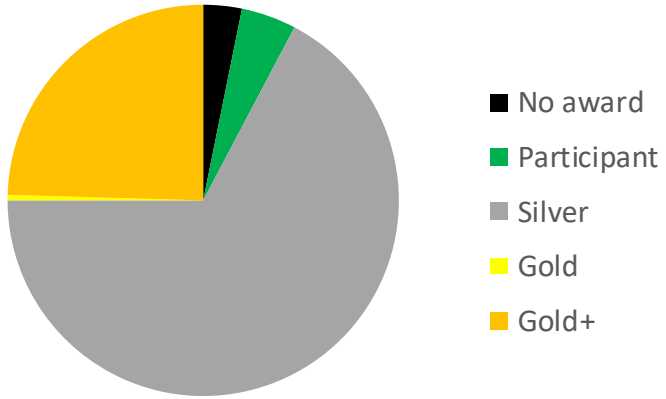


Questions about this data can be directed to Liz.Montgomery@heart.org

NHCI / Target: BP Engagement & Awards



9 of the 39 NC CHCs are in Target: BP (23%)
2 of the 9 NC NHCI CHCs are in Target: BP (22%)



Questions about this data can be directed to Liz.Montgomery@heart.org

American Heart Association.

The Possibilities:
What could be.

Circulation

AHA POLICY STATEMENT

Addressing Structural Racism Through Public Policy Advocacy: A Policy Statement From the American Heart Association

Michelle A. Albert, MD, MPH, FAHA, Chair; Keith Churchwell, MD, FAHA, Vice Chair; Nihar Desai, MD, FAHA; Janay C. Johnson, MPH; Michelle N. Johnson, MD, MPH; Amit Khera, MD, FAHA; Jennifer H. Mieres, MD, FAHA; Fatima Rodriguez, MD, MPH, FAHA; Gladys Velarde, MD, FAHA; David R. Williams, PhD; Joseph C. Wu, MD, PhD, FAHA; on behalf of the American Heart Association Advocacy Coordinating Committee

ABSTRACT: During the COVID-19 pandemic, the American Heart Association created a new 2024 Impact Goal with health equity at its core, in recognition of the increasing health disparities in our country and the overwhelming evidence of the damaging effect of structural racism on cardiovascular and stroke health. Concurrent with the announcement of the new Impact Goal was the release of an American Heart Association presidential advisory on structural racism, recognizing racism as a fundamental driver of health disparities and directing the American Heart Association to advance antiracist strategies regarding science, business operations, leadership, quality improvement, and advocacy. This policy statement builds on the call to action put forth in our presidential advisory, discussing specific opportunities to leverage public policy in promoting overall well-being and rectifying those long-standing structural barriers that impede the progress that we need and seek for the health of all communities. Although this policy statement discusses difficult aspects of our past, it is meant to provide a forward-looking blueprint that can be embraced by a broad spectrum of stakeholders who share the association's commitment to addressing structural racism and realizing true health equity.

Source: Albert et al. 2024; *Circulation*

Possibilities – AHA and NACHC Strategic Collaboration

- Eliminating health disparities
- Improving cardiovascular and brain health through efforts targeting access to:
  - cardiovascular health resources,
  - blood pressure control resources,
  - patient education, and
  - other disease and risk factor control resources.
- Capitalize on the strengths of each organization to achieve our shared goal of equitably advancing cardiovascular and brain health.
- 100% CHC participation in Target: BP

Engagement & Achievement

Award Summary	2017	2018	2019	2020	2021*	2022**	*2023*
Population with hypertension served and participating HCOs							
Total Population with hypertension served by HCOs submitting data	3.4M	8.8M	8.2M	8.9M	7.9M	8.4M	***8.6M***
Total HCOs submitting data	330	802	1183	1081	1167	1,416	*1806*
# (%) HCOs repeating submission from prior year	-	220 (67%)	607 (76%)	626 (53%)	863 (80%)	978 (84%)	*1,228 (87%)*
Awards earned by participating HCOs							
Total Awards	330	802	1183	1081	1167	1,309	*1709*
Participant Attested to fewer than 4 of 6 criteria Reported < 70% BP control rate	145	455	644	577	203	83	*59*
Silver Attested to at least 4 of 6 evidence-based activities Reported < 70% BP control rate	-	-	-	-	567	675	*784*
Gold Attested to fewer than 4 of 6 evidence-based BP activities Achieve ≥ 70% BP control rate	185	347	539	504	125	169	*161*
Gold+ Attested to at least 4 of 6 evidence-based BP activities Achieve ≥ 70% BP control rate	-	-	-	-	272	382	*705*
HCOs attesting to evidence-based activities and reporting control rates ≥70%							
Total HCOs attesting to at least 4 of 6 evidence-based BP activities (Silver + Gold+)	-	-	-	-	839	1057	*1,493*
Total HCOs reporting control rates ≥ 70% (Gold + Gold+)	185	347	539	504	397	551	*868*

* 2021 was the first year that Silver/Gold+ were offered

** 2022 was the first year that only 1st-time submitters were eligible for a Participant Award, making some prior data submitters ineligible for an award.

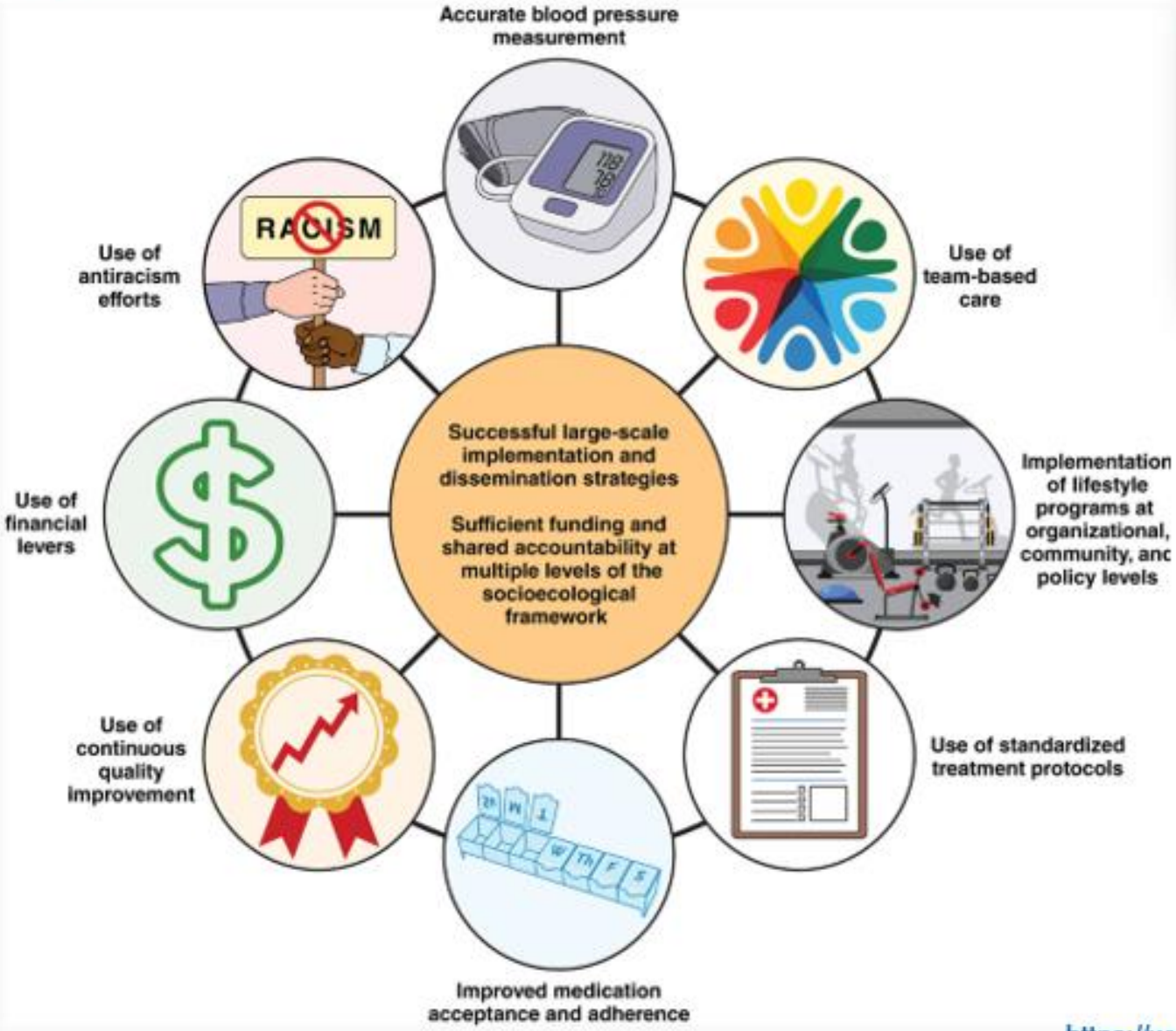
From this…

- 40% of 1487 CHCs in Target: BP
- 63.4% BP control in CHCs

To this…

- 100% of 1487 CHCs in Target: BP
- 70+% BP control in CHCs

Strategies to Improve Blood Pressure Control




AHA/AMA SCIENTIFIC STATEMENT

Implementation Strategies to Improve Blood Pressure Control in the United States: A Scientific Statement From the American Heart Association and American Medical Association

Marwah Abdalla, MD, MPH; Vice Chair; Shari D. Bolen, MD, MPH; Jeffrey Brettler, MD; Brent M. Egan, MD; Keith C. Ferdinand, MD; Cassandra D. Ford, PhD; Daniel T. Lackland, DrPH; Hilary K. Wall, MPH; Daichi Shimbo, MD, Chair; on behalf of the American Heart Association and American Medical Association

Emphasis on translating science into practice:

- Health equity efforts
- Accurate BP measurement
- Evidence-based SMBP and lifestyle change programs
- Team-based care models
- Treatment protocols
- Medication adherence strategies
- Data-driven continuous quality improvement

https://www.ahajournals.org/doi/10.1161/HYP.0000000000000232

“Si se puede.”

Dolores Huerta (1930 -)
United Farm Workers

“I’m not an optimist.
I’m a very serious possibilist.”

Hans Rosling (1948-2017)