How To Achieve Health Equity With A Community-Based Model

Southeastern San Diego (SESD) Cardiac Disparities Project

ALL HEART Convening
March 2, 2017
Hyatt Regency Huntington Beach Resort & Spa

Presented by

Rodney G. Hood, MD, FACP

President Multicultural Health Foundation

Heart Care Champion Lead

Be There San Diego
Preventing Heart Attacks & Strokes

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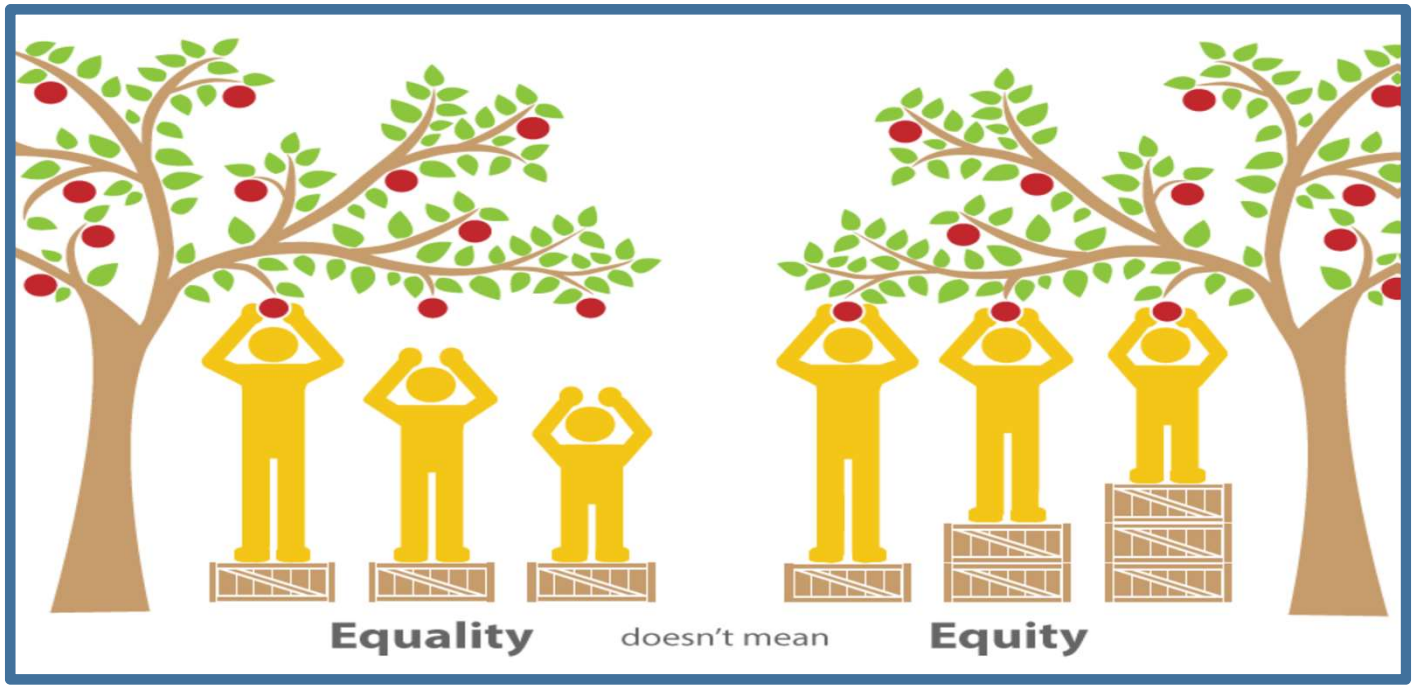
Definitions of Equal vs Equity in Relationship to Health Justice

- Equal
  - Resources for and access to services that are available and distributed equally to all populations regardless of need.
- Equity
  - Resources for and access to services that are available and distributed in proportion to the need of specific populations or individuals.

How to Achieve Health Equity

Top Down Solution

Bottom Down Solution



Health Equity Math

- **Assume quality gradient of 1 → 10 (best):**

Whites = 6 and minorities = 4

Disparity difference = 2

- **Goal: Improve quality to 9:**

We need to achieve a 50% (6 to 9) increase for whites and 125% (4 to 9) increase for minorities in order to achieve equity.

- **If we achieved a 50% equal improvement for all:**

Whites = 6 to 9 minorities = 4 to 6

Disparity difference = 3

- **Therefore we have a worsening quality disparity of 50%.**

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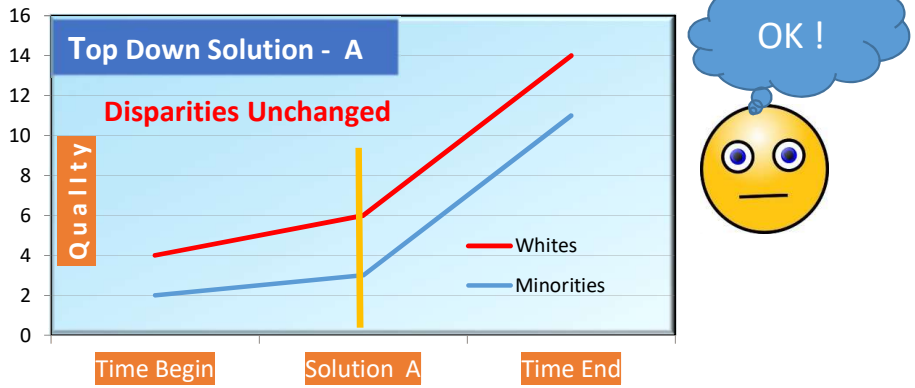
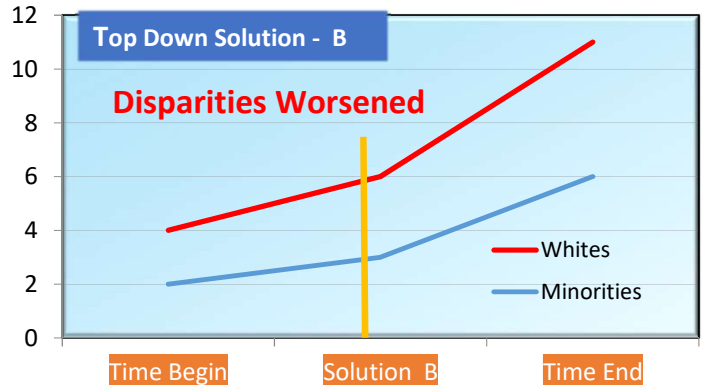
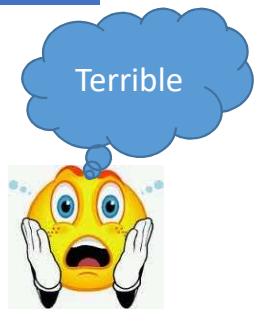
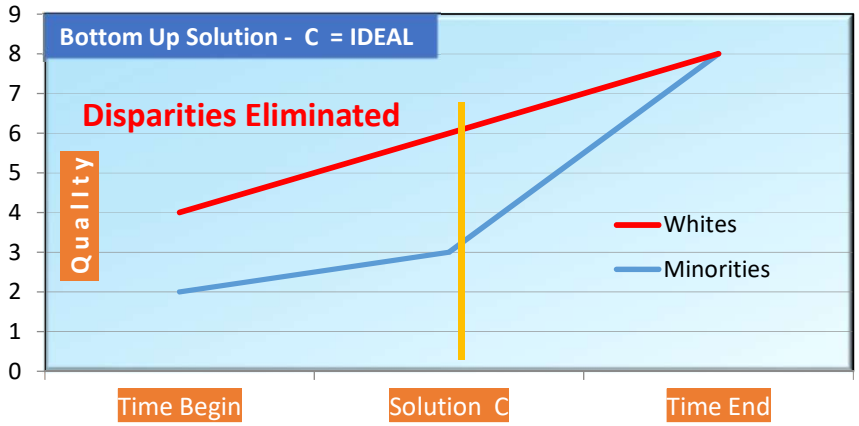
Quality Improvement and the Consequences of a Chosen Solution to Eliminate Ethnic and Racial Disparities









Research

JAMA. 2013;310(7):699-705.

Original Investigation

Improved Blood Pressure Control Associated With a Large-Scale Hypertension Program

Marc G. Jaffe, MD; Grace A. Lee, MD; Joseph D. Young, MD; Stephen Sidney, MD, MPH; Alan S. Go, MD

IMPORTANCE Hypertension control for large populations remains a major challenge.

OBJECTIVE To describe a large-scale hypertension program in Northern California and to compare rates of hypertension control in that program with statewide and national estimates.

DESIGN, SETTING, AND PATIENTS The Kaiser Permanente Northern California (KPNC) hypertension program included a multifaceted approach to blood pressure control. Patients identified as having hypertension within an integrated health care delivery system in Northern California from 2001-2009 were included. The comparison group comprised insured patients in California between 2006-2009 who were included in the Healthcare Effectiveness Data and Information Set (HEDIS) commercial measurement by California health insurance plans participating in the National Committee for Quality Assurance (NCQA) quality measure reporting process. A secondary comparison group was included to obtain the reported national mean NCQA HEDIS commercial rates of hypertension control between 2001-2009 from health plans that participated in the NCQA HEDIS quality measure reporting process.

MAIN OUTCOMES AND MEASURES Hypertension control as defined by NCQA HEDIS.

Editorial page 695

Author Video Interview at jama.com

Supplemental content at jama.com

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Patient Centered Medical Home (PCMH)

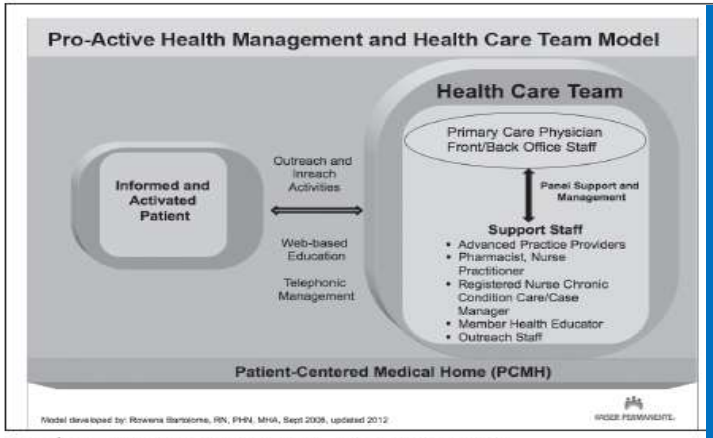

Figure 1. Pro-Active Health Management and Health Care Team Model [1]

Support Staff

- Advance Practice Providers
- Pharmacist
- Nurse Practitioner
- Registered Nurse Chronic Condition Care/Case Manager
- Member Health Educator
- Outreach Staff

ORIGINAL RESEARCH & CONTRIBUTIONS

- Perm J 2016 Winter;20(1):53-59

Population Care Management and Team-Based Approach to Reduce Racial Disparities among African Americans/Blacks with Hypertension

Rowena E Bartolome, RN, PHN, MHA; Agnes Chen, DO; Joel Handler, MD; Sharon Takeda Platt, PhD; Bernice Gould, RN, MNA

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Kaiser Permanente Gardena Medical Group

Blacks account for 65% of the patients with hypertension

BP Control rates for Blacks < Whites improved from 76.6% to 81.4%

BP Control rates for Whites > Blacks improved from 82.9% to 84.2%

Racial Disparity for BP control decreased from 6.3% to 2.8%

Benefits of A Patient or Population Centered Approach vs Provider or System Centered Approach

Cardiovascular Risk Calculator

OTHER

These estimates may underestimate the 10-year and lifetime risk for persons from some race/ethnic groups, especially American Indians, some Asian Americans (e.g., of south Asian ancestry), and some Hispanics (e.g., Puerto Ricans), and may overestimate the risk for others, including some Asian Americans (e.g., of east Asian ancestry) and some Hispanics (e.g., Mexican Americans).

2013 Prevention Guidelines
ASCVD RISK ESTIMATOR

http://tools.cardiosource.org/ASCVD-Risk-Estimator/

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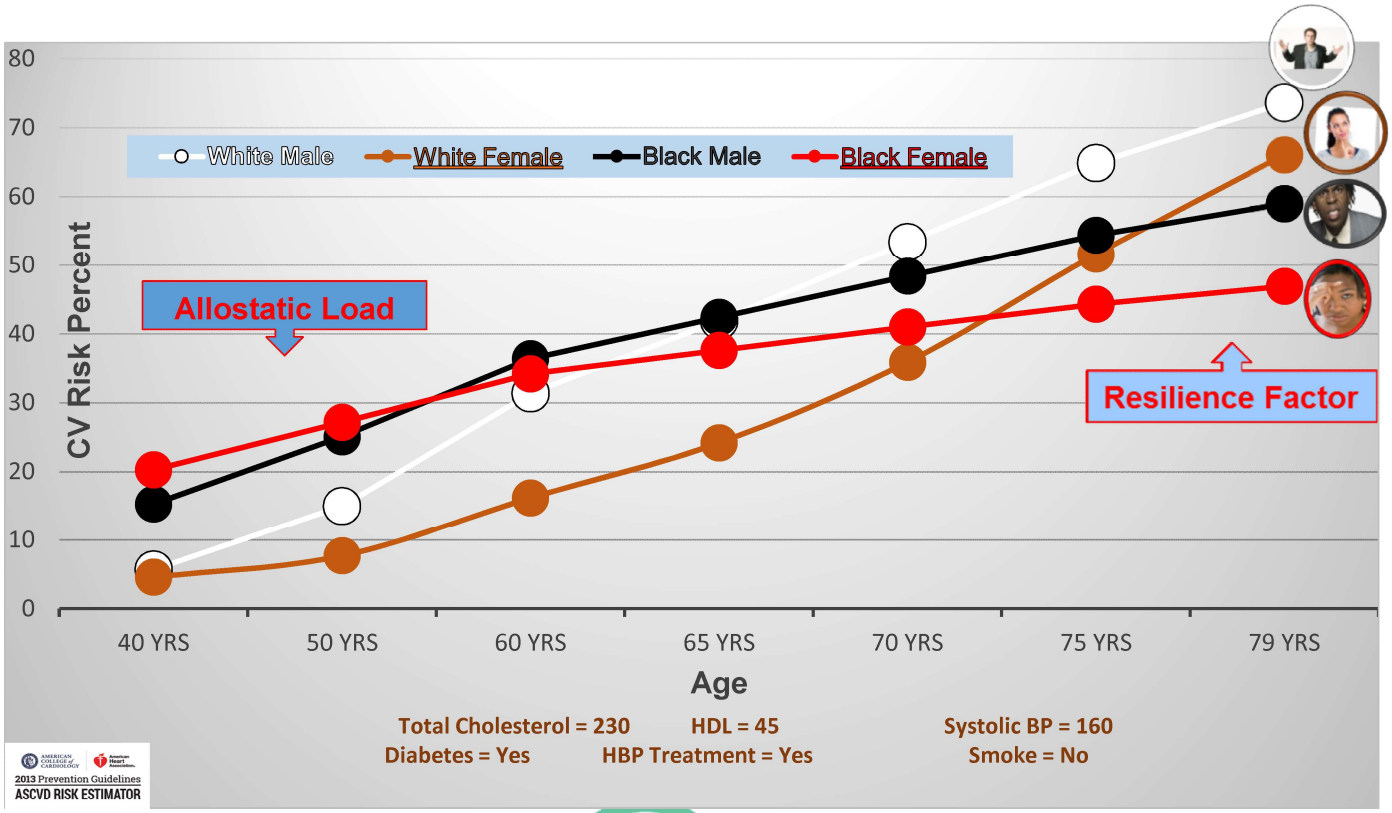
Cardiovascular Risk Comparisons of Sex, Age, and Race/Ethnicity

Allostatic Load vs Resilience Factors



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The Effect of Race and Ethnicity on Cardiovascular Risk in US

2013 Prevention Guidelines
ASCVD RISK ESTIMATOR

Highest CV Risk

- African Americans ------ WHY?

Higher CV Risk

- Native Americans
- Asians of South Asian ancestry ---------- **WHY?**
- Some Hispanics such as Puerto Ricans

Whites

- **Majority Ethnic Cohort in USA**

Lower CV Risk

- **Some Hispanics such as Mexican Americans ------- WHY?**
- **Some Asians of East Asian ancestry**

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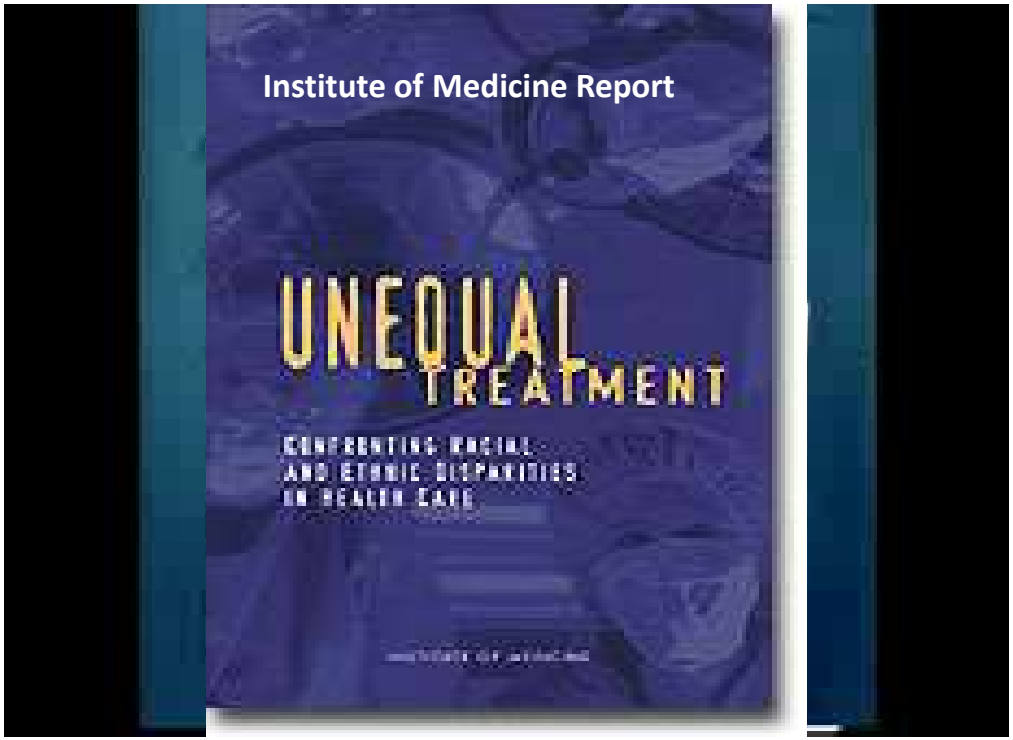
Observation

White House Conference on the Elimination of Racial & Ethnic Health Disparities

"There is a Direct Correlation Between the Level of Health Disparities and the Amount of Melanin in the Population."

Rodney Hood, MD



White House Conference on The Elimination of Race and Ethnic Disparities 2001

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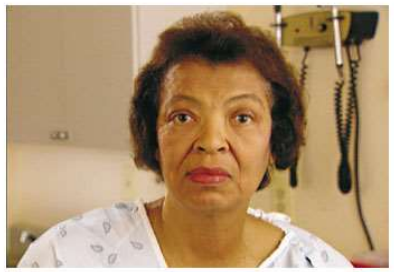
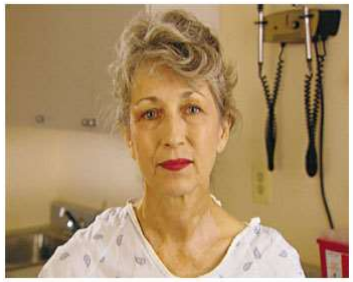
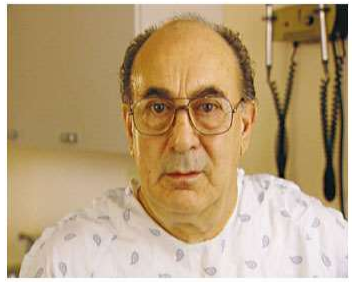
“Patients” Experiencing Symptoms of Heart Disease

Schulman (NEJM 1999)






Results: *Blacks with same diagnoses and symptoms were recommended for less aggressive treatment than Whites with cardiovascular disease.*

Physicians' Implicit Attitudes About Race by MD, Race, Ethnicity, and Gender

JA Sabin, PhD, MSW, BA Nosek, PhD, AG Greenwald, PhD, FP Rivara, MD, MPH, J Health Care Poor Underserved. 2009 August ; 20(3): 896–913.

Race Implicit Association Test (IAT)		
All test takers	N	Mean value
Male	148,425	0.39
Female	196,044	0.32
MD Test Takers		
White MDs		
Male	1,076	0.49
Female	596	0.35
African American MDs		
Male	100	0.12
Female	106	0.00
Asian MDs		
Male	184	0.44
Female	104	0.33
Latino MDs		
Male	64	0.42
Female	49	0.37

Conclusions

MDs overall have higher anti-Black biases than all other test takes

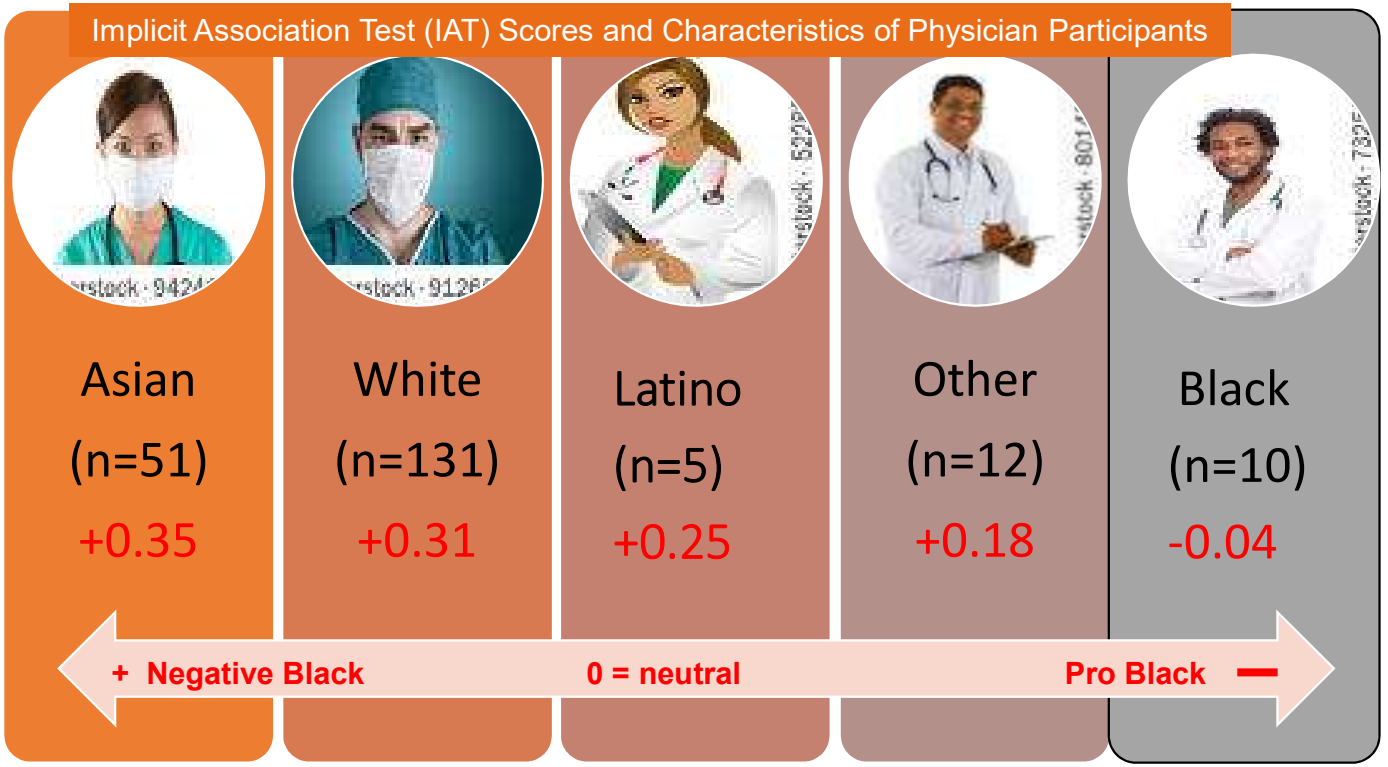
All physician ethnic groups showed anti-Black biases except for African American physicians who showed little or no bias.

Female physicians showed less bias than males and African American female physicians were less biased.

implicit.harvard.edu

Young Physicians Measured Implicit Negative Biases Toward Black Patients

JGIM: June 2007



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Post Traumatic Slavery Disorder (PTSD)

A Proposed Cause for CVD in High Risk African American Populations

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Thesis

Post Traumatic Slavery Disorder (PTSD)

- Racism and the legacy of slavery, as perceived by Blacks and others, produces a unique physiologic and insidious chronic stress (allostatic load) that leads to increased risk to diseases, including CVD and early death.

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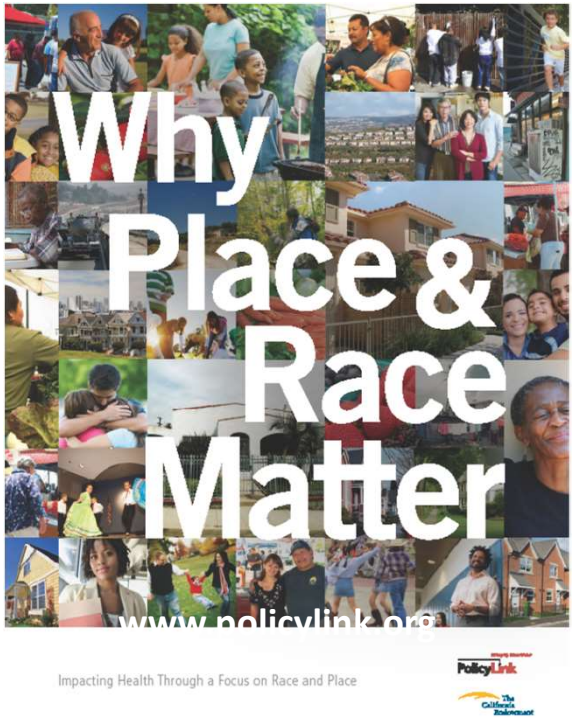
Fact

- In America, Your Zip Code (Place of Residence) and Race (Ethnicity) are More Determinative of Your Health and Life Expectancy than Genetics.

Health Status and Outcomes



"PolicyLink and The California Endowment have long recognized that place and race matter –

"Our research and our conversations with people working in the field have reaffirmed our belief that place matters. By the same token, race matters—a lot."

– **2011**

Robert K. Ross, MD
President and CEO
The California Endowment

Angela Glover Blackwell
Founder and CEO
PolicyLink

Your Zip Code is a more accurate predictor of longevity than genetics

92037

85 years

91915

80 years

92114

79 years

92115

77 years

Life Expectancy and Your Zip Code

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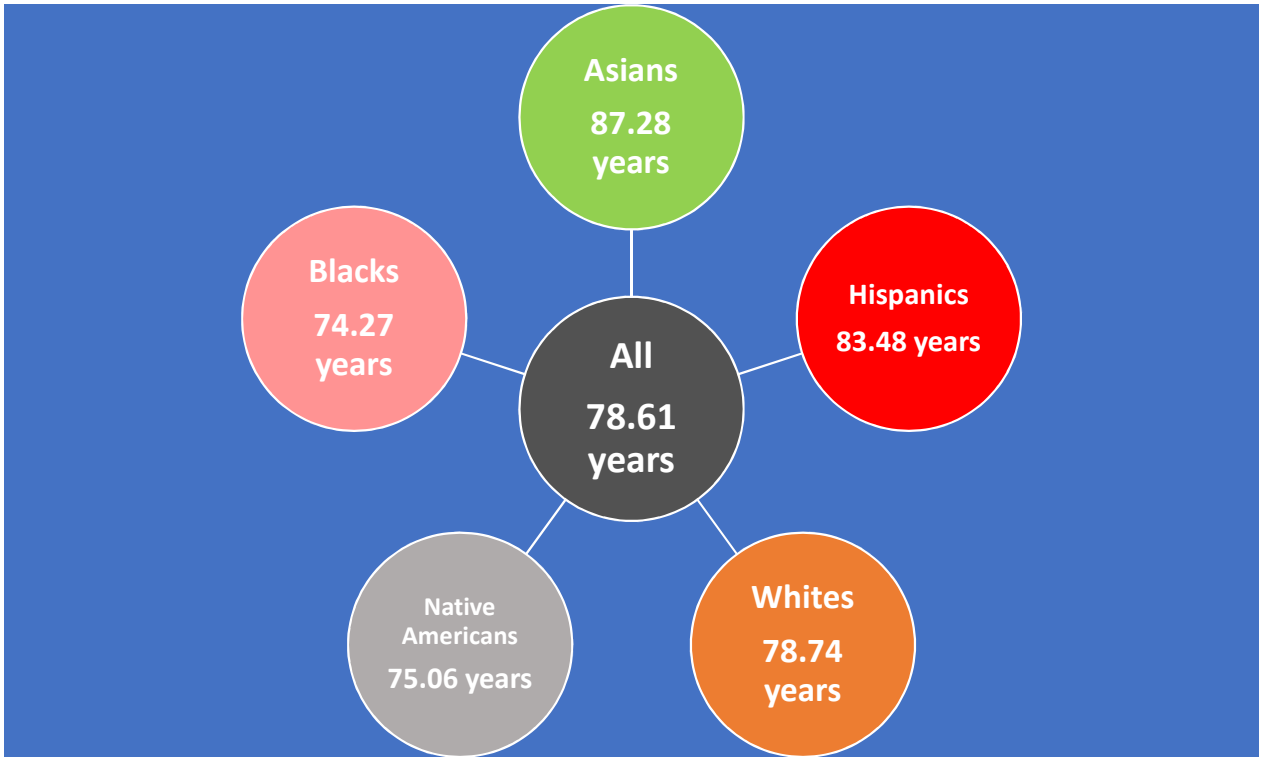
Life Expectancy in US Population by Race and Ethnicity - 2011



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Concepts of Race

- Out of Africa Theory of Human Origin
- Human genome is 99.9% the same in all human beings.
- Race is a ***social*** construct rather than ***biological***
- ***One Race = The Human Race evolved into many different ethnicities with minor phenotype differences separated by geography, beliefs and customs.***

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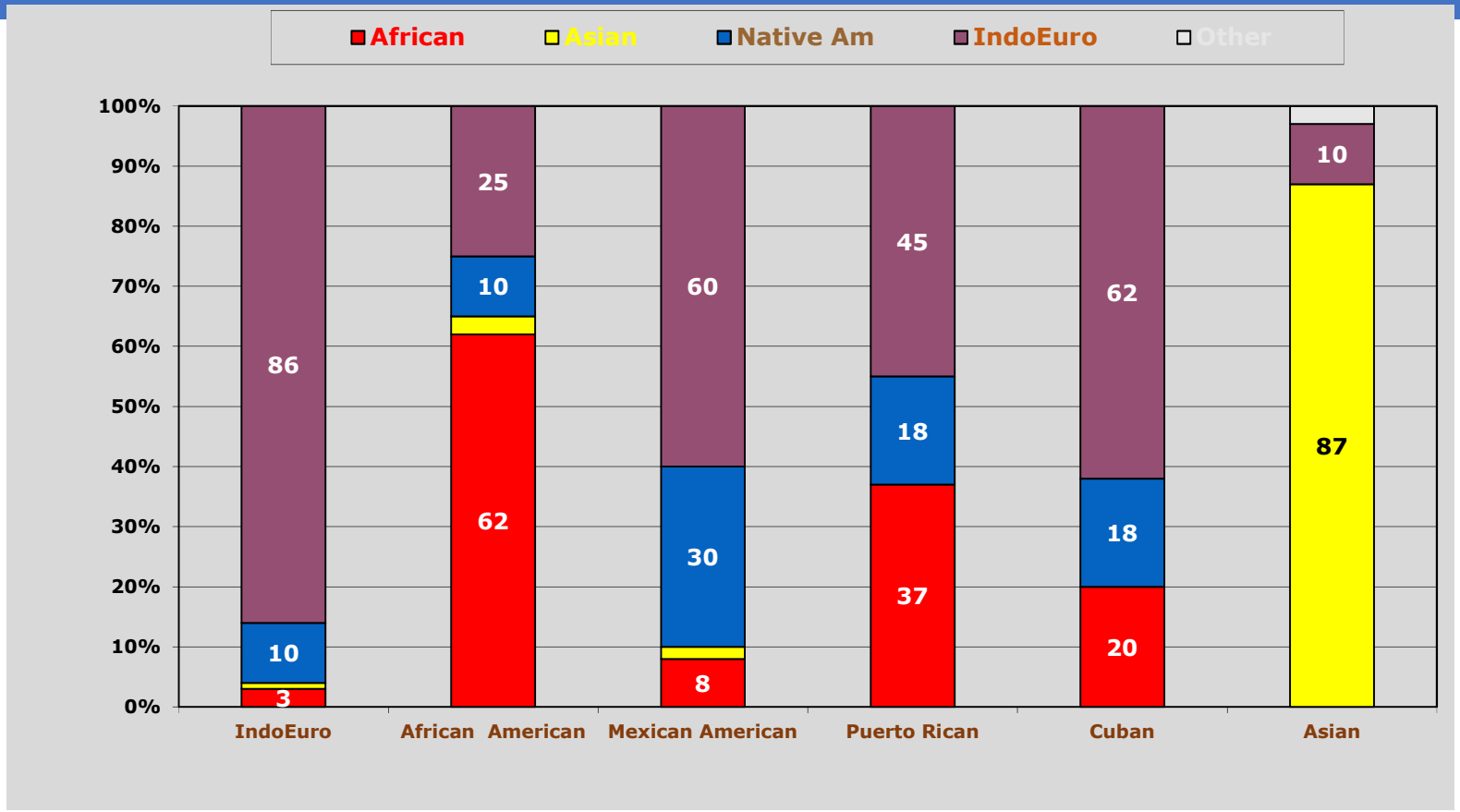
Genetic Pools and Health Status

- Pima Indians of Arizona = 50% with diabetes and 95% with diabetes are obese however the Pima's in Mexico have very little obesity or diabetes. ***Why?***

- African Americans > rates of hypertension than Africans from West Africa. ***Why?***

- Newer Hispanic and African immigrants to US have better health outcomes than their counterparts in US and worsen with subsequent generation. ***Why?***

Estimated North American Ethnic Genetic Admixture



Concepts of Human Development Index and Allostatic Load

"Not everything that can be counted counts, and not everything that counts can be counted."

Albert Einstein or Bruce Cameron

A Human Development Portrait of California (2014 – 2015)

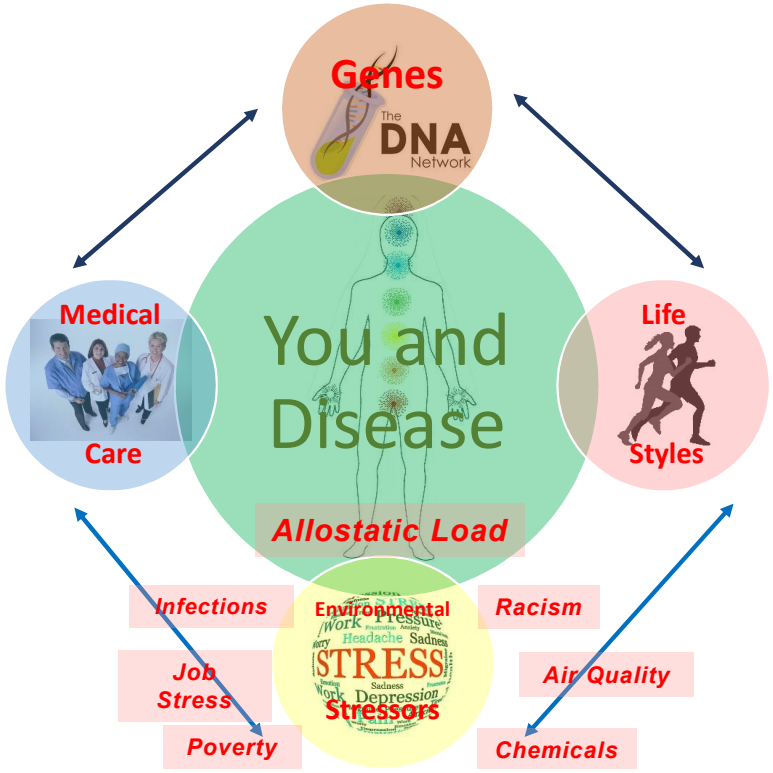
Measure of America
The Social Science Research Council

Race / Ethnicity	Life Expectancy at birth	Health Index	Education Index	Income Index	Human Development Index
US	79.0	5.43	5.06	4.71	5.07
California	81.2	6.35	5.04	4.79	5.39
Asian Americans	86.9	8.72	7.01	6.45	7.39
Whites	80.1	5.88	6.25	6.83	6.32
African Americans	**75.6**	**3.99**	**4.64**	**4.93**	**4.52**
Native Americans	79.6	5.66	4.66	3.22	4.51
Latinos	**83.7**	**7.36**	**2.60**	**2.32**	**4.09**

Dynamic Interactions Between Genes and Environment

Estimated Contribution to Disease

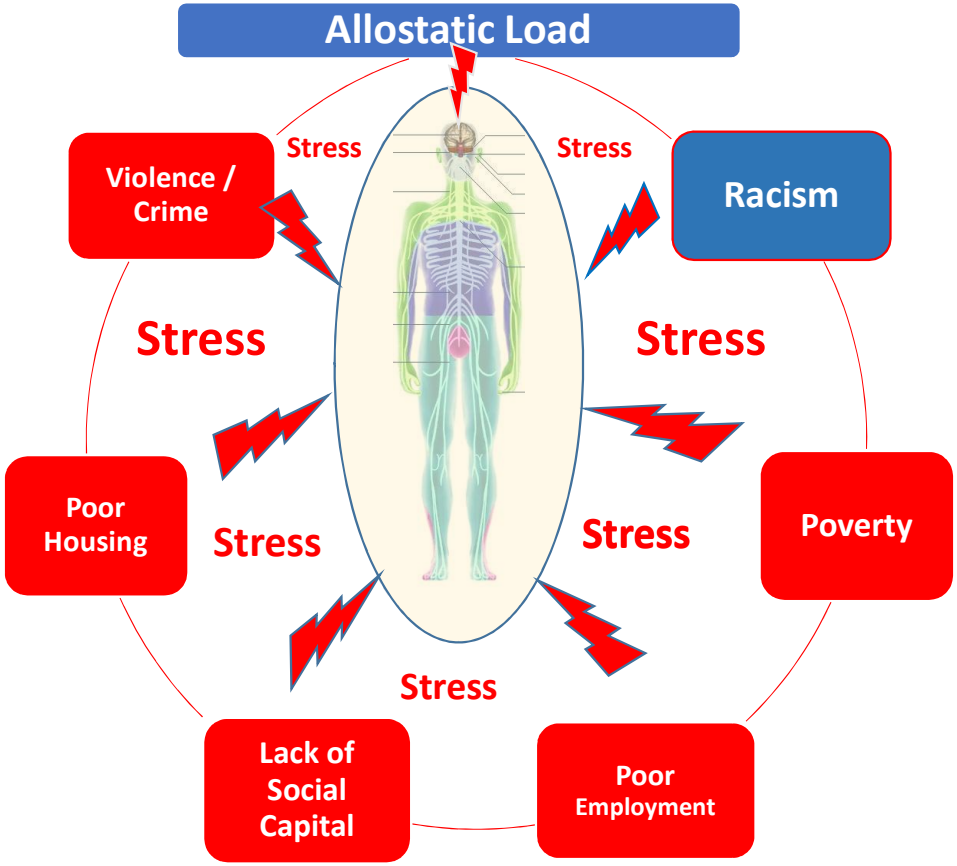
Biology = 25%
Life Style = 52%
Environment = 12%
Medical Care = 10%



Concept of Allostasis

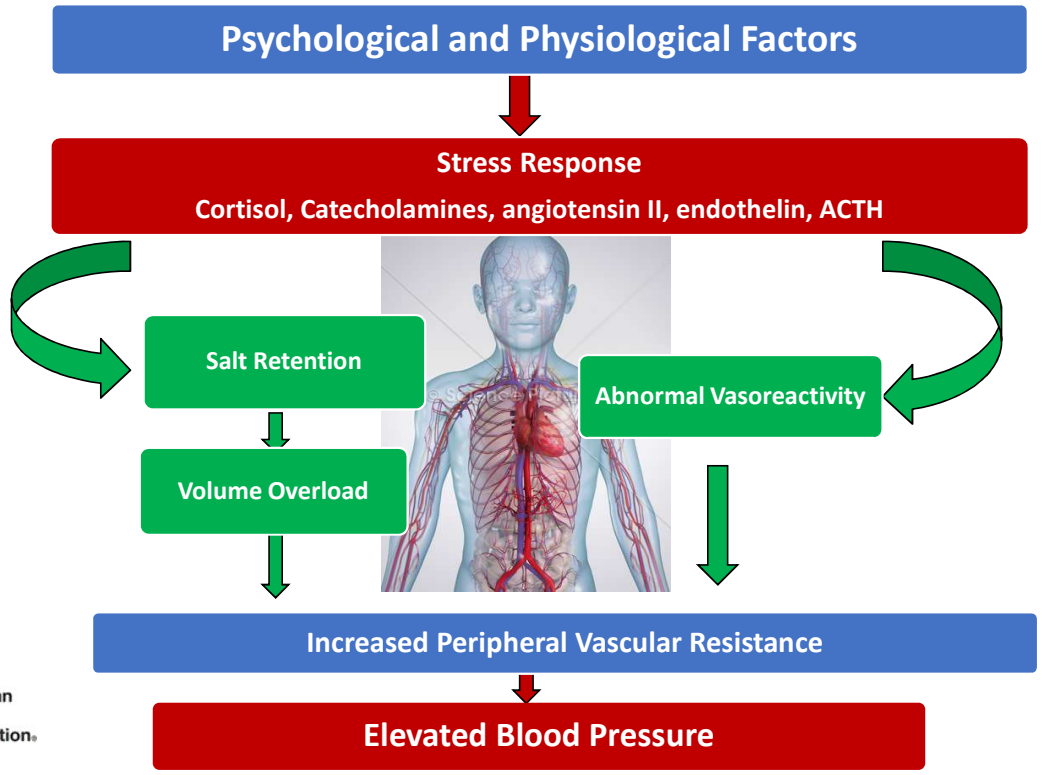
How we internalize our environment !

Allostatic Load = Chronic and Insidious Physiological Stress Causing Wear and Tear on Body Organs ⟶ Chronic Diseases



A Representation of the Interaction Between Psychological and Physiological Factors in the Development of Hypertension in Blacks

Ergul, A. Hypertension. 2000;36:62-67



American Heart Association.

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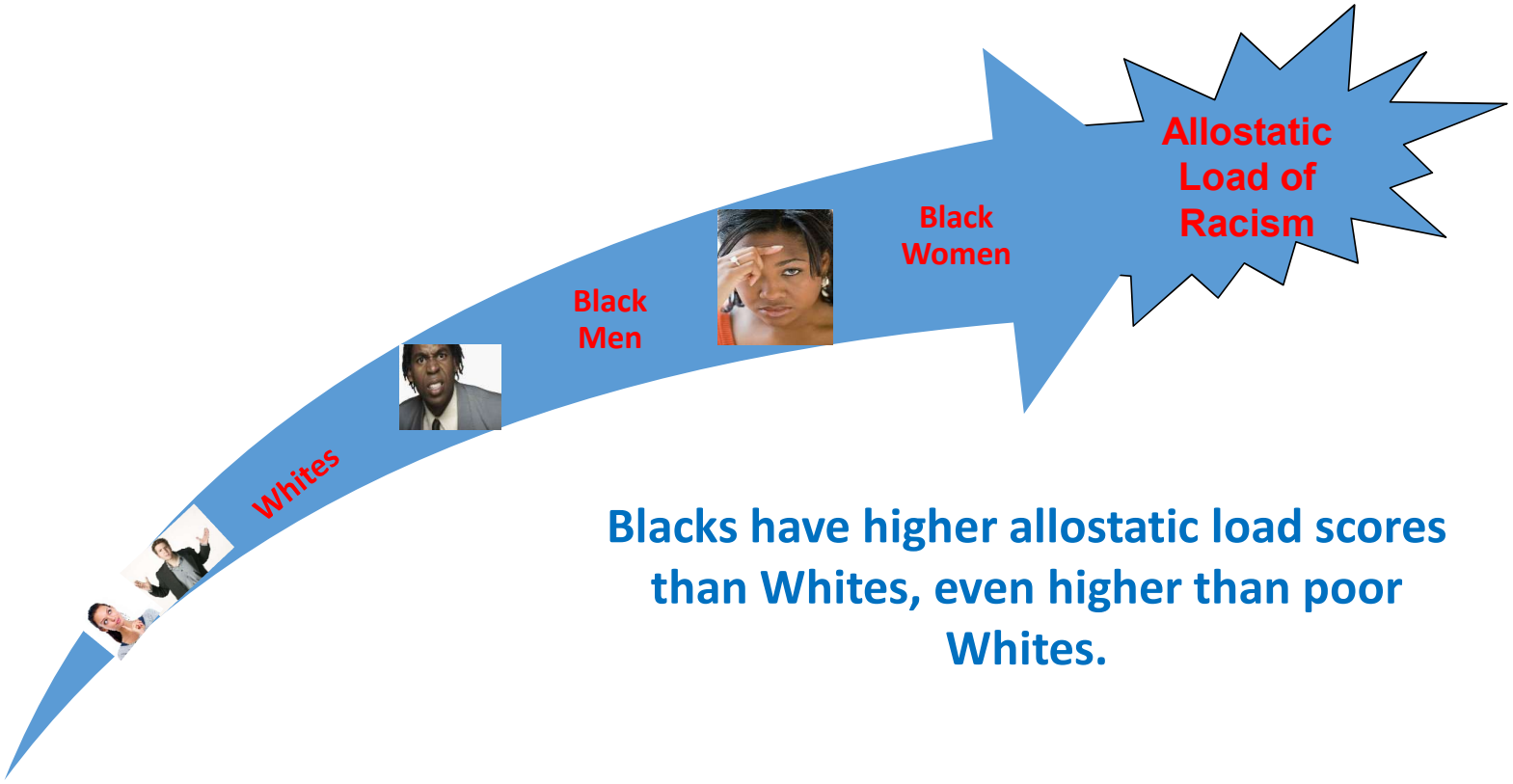
Allostatic Load Effects on Race, Poverty, and Gender

Am J Public Health. 2006;96:826–833



Blacks have higher allostatic load scores than Whites, even higher than poor Whites.

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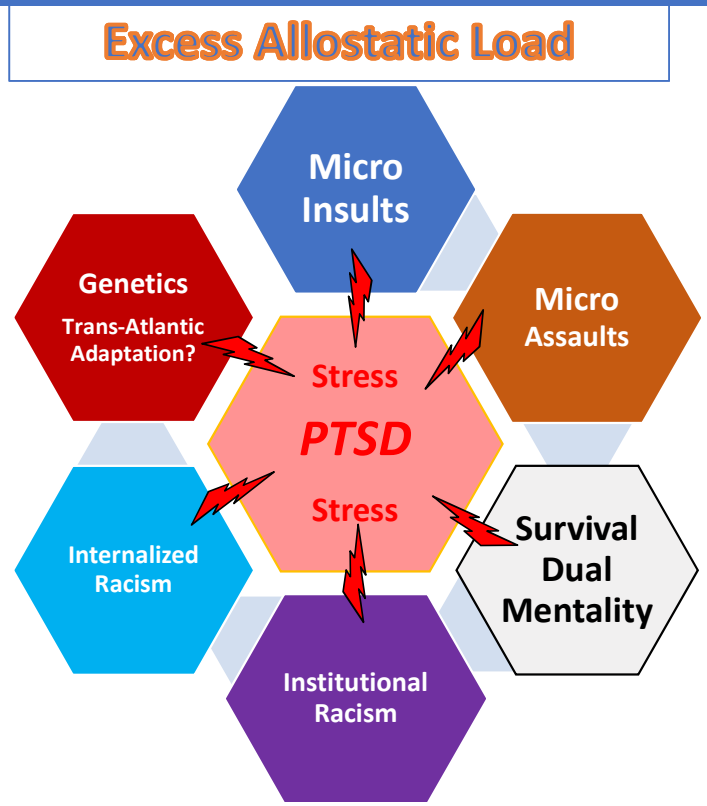
Post Traumatic Slavery Disorder (PTSD) and Racism

Primary Biomarkers

- Cortisol
- Catacholamines
- Angiotensin II
- Endothelin



Secondary Biomarkers

- Blood pressure
- Glycated HGB (A1C)
- Lipids (T. chol, TG)
- C-reactive protein
- Waist to hip ratio
- Homocysteine
- Albumin
- GFR

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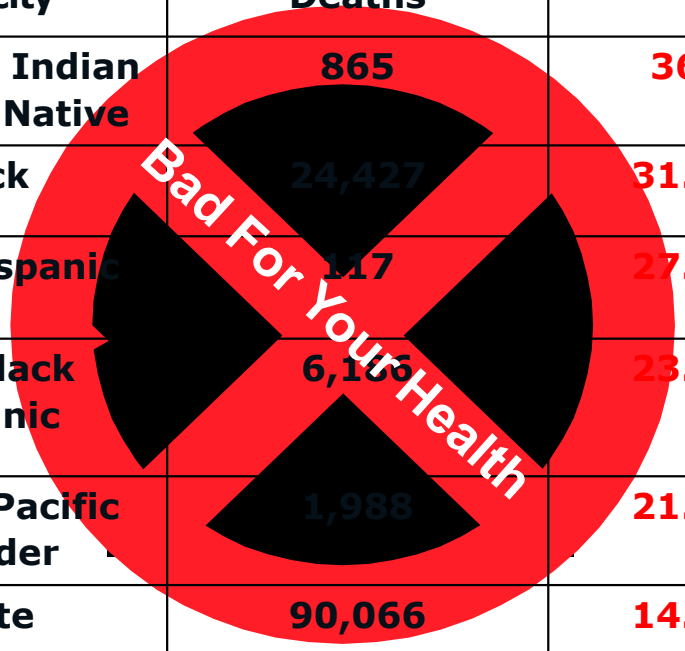
American Culture
"Its Effects on Race and Premature Heart Deaths"
Centers for Disease Control and Prevention (CDC) – 2001

Race and Ethnicity	Premature Heart Deaths	Percent	Rank
American Indian / Alaska Native	865	36%	1
Black	24,427	31.5%	2
Black Hispanic	117	27.5%	3
Non Black Hispanic	6,136	23.5%	4
Asian / Pacific Islander	1,988	21.1%	5
White	90,066	14.7%	6



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Community-Based ALL HEART Project a Step Toward Health Equity

Southeastern San Diego Cardiac Disparities Project

American Heart Association
life is why™

Kaiser Permanente

Be There San Diego
Preventing Heart Attacks & Strokes

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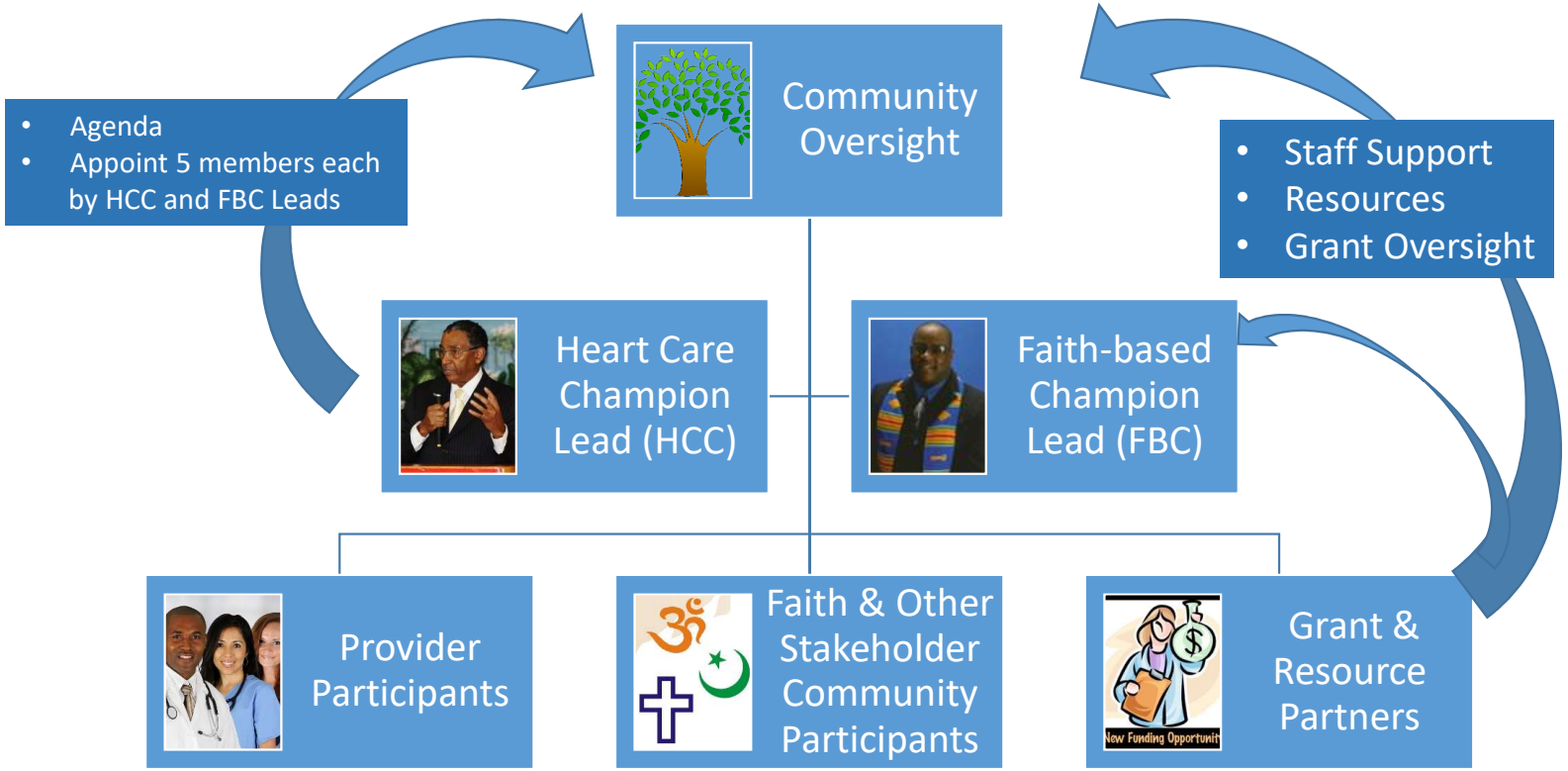
SESD Cardiac Disparities Project Oversight



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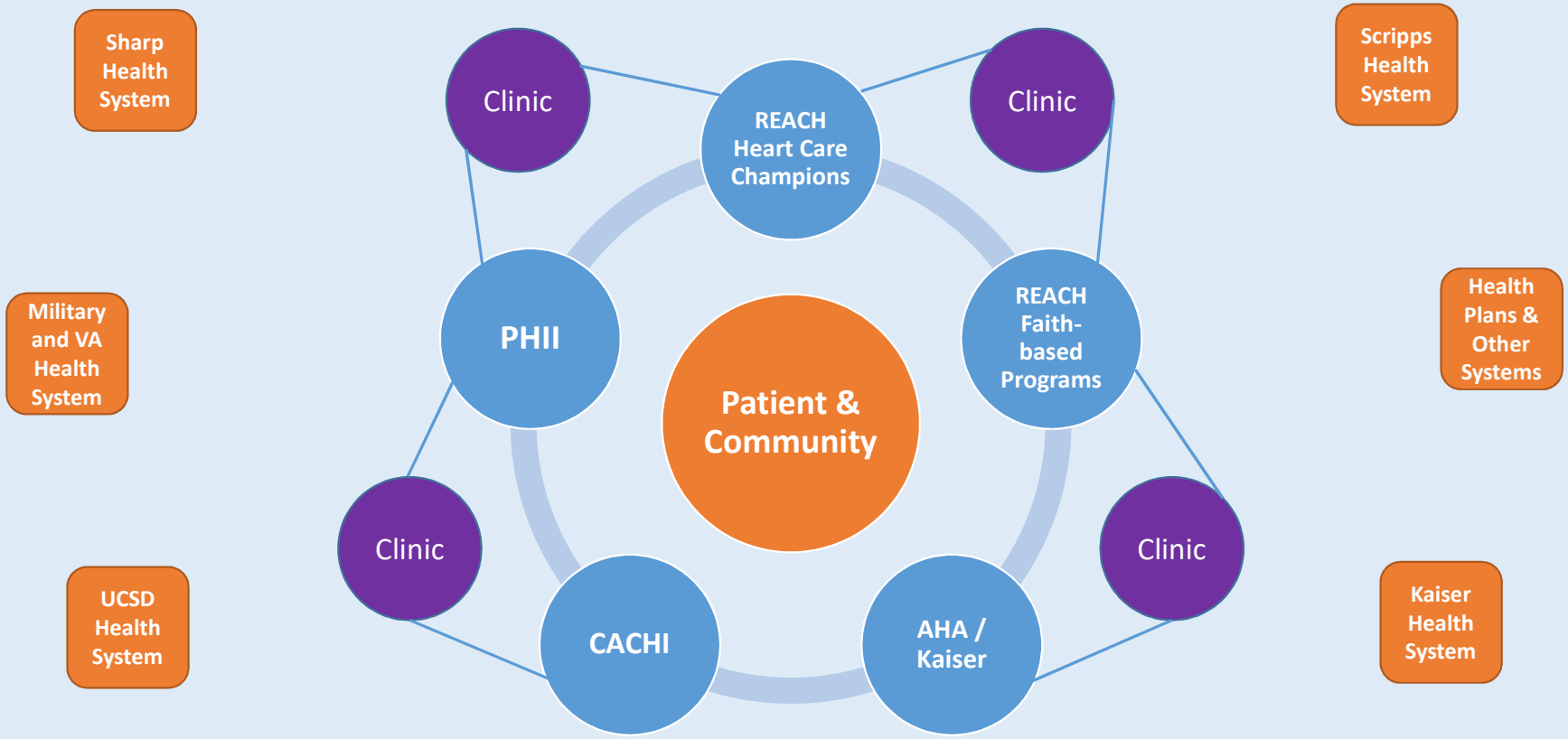
Concept of a Virtual Patient Centered Medical Home (VPCMH)
An Agnostic Approach to Integrated Health Care with Multiple Health Systems



Benefits of Unaffiliated VPCMH vs Affiliated PCMH

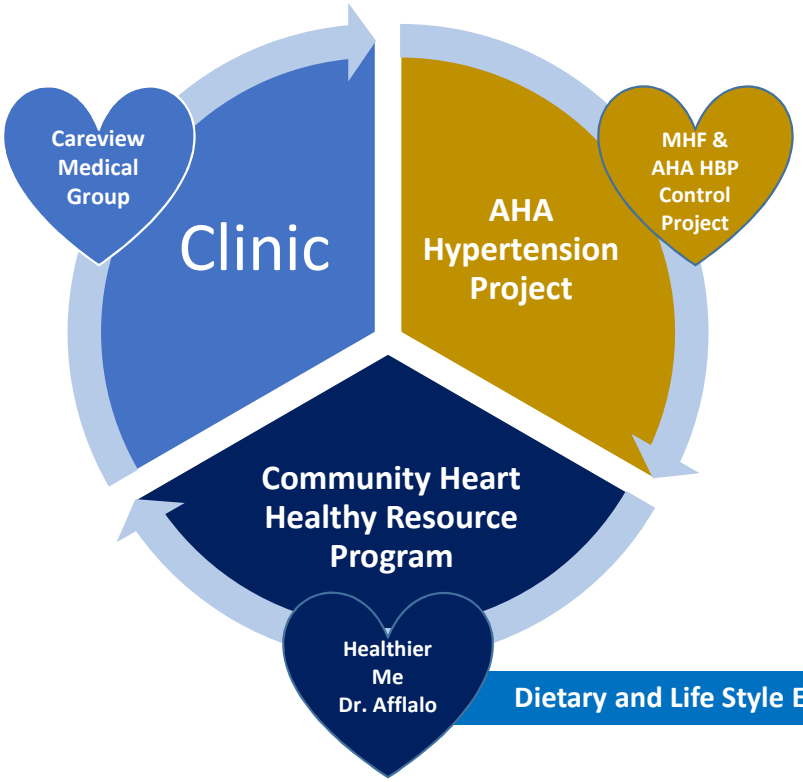
- **Agnostic to or unaffiliated with health systems or clinics**
- **Truly patient-centered and community-based rather than clinic based**
- ***Population specific***
- ***Bottoms up approach is better model to achieve health equity for certain populations regardless of patient health system affiliation***
- ***The focus of patients in their communities rather than the clinics is additive and synergistic with the traditional top down interventions creating better health structure to improve quality, outcomes, and achieve health equity for the most vulnerable populations.***
- ***VPCMH model was used for the CMMI Innovation Hot Spotting Grant (PHII) and proved effective with decrease utilization, improved patient satisfaction, and cost savings that showed a ROI = 8:1.***

Virtual Patient Centered Medical Home (VPCMH) Model

"An Integrated Community Centered Partnership Model"

"Community-based & Patient Centered Integrated Team Approach to Hypertension Control"

- ASCVD 10 year Risk Estimator
- Hypertension Drug Protocol
- High Risk Patients on ALL/TALL
- HCC community meetings
- Interactions with Nurse Case Manager and HCC Lead



- Nurse Home Visits
- Home BP monitoring
- Close Clinic Follow Ups
- Patient-centered community clinical linkages
- Bidirectional Community-Clinical Referrals

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Summary

Benefits of Community-based VPCMH Model

Patient	• **Empowered patients are healthier and more satisfied**
Provider	**Team approach allows more focus on clinical management and improved quality measures.**
Health System	• **Decrease utilization and better integration of social & clinical services**
Payor	**Cost savings can support new financial models for community-based interventions**
Community	• **Community wellness** • **Workforce employment opportunities** • **Reduce health disparities**