

Translation for All: Equity-focused Interventions and Research Engagement in Underserved Populations

Rachel Whitmer, PhD

Professor of Epidemiology and Neurology

**Associate Director, UC Davis Alzheimer's Disease
Research Center**

Director, Population Brain Health Lab

University of California , Davis



@Prof_R_Whitmer

<https://rachelwhitmer.ucdavis.edu>

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Translation for All: Equity-focused Interventions and Research Engagement in Underserved Populations

Starting the Conversation !

- How do we broaden our scope to include all that are in underserved populations?
- How do we engage underserved populations in research ?
- What could equity focused interventions looks like ?
- What are the challenges and resources needed ?

Translation for All: Goals for Today

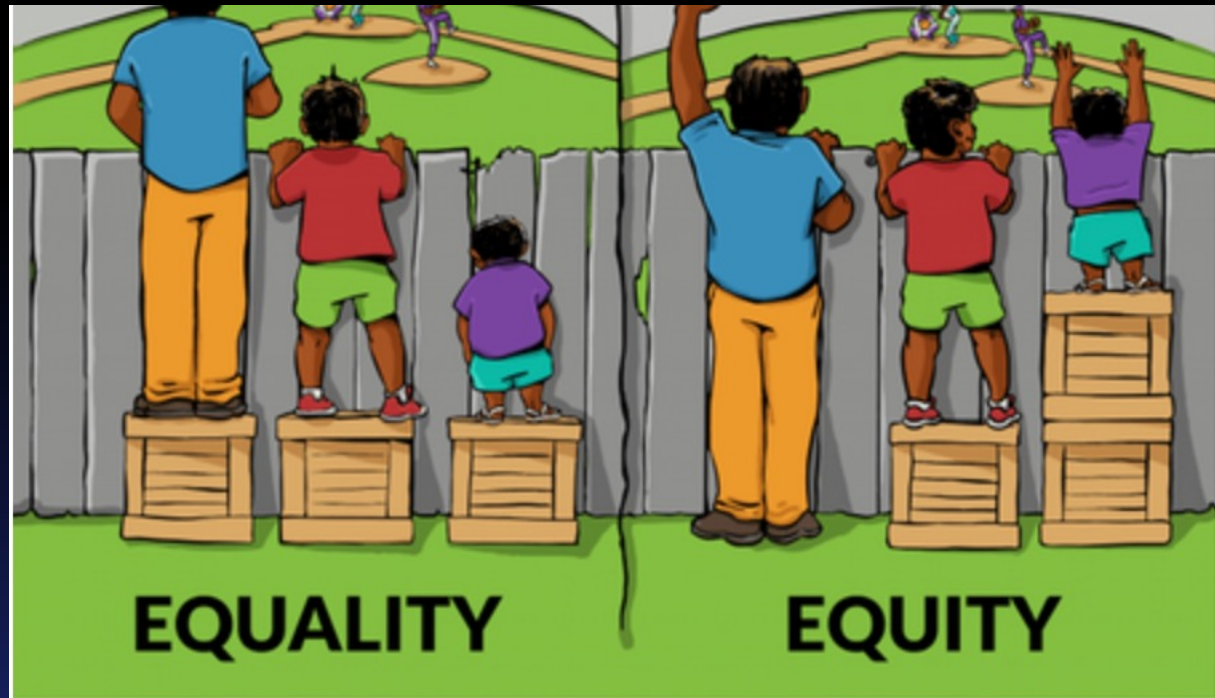
ADRC Network has the potential to be a leader in uncovering new risk and resilience factors to ADRD for Underserved Populations

“Underserved” is a broad term and captures people who are not already part of ADRC research

Inequities in brain health occur over a lifetime and start at birth or before

Challenges in research engagement are not trivial and need to be solved

Inequality Versus Inequity



Health disparities

The unequal distribution of health and illness due to unfair economic arrangements, poor social policies and bad politics.

- WHO Commission on the Social Determinants of Health, 2008

- Health disparities are NOT caused by differences in genetics or individual variation in health/illness.

Health equity

“The absence of systematic disparities in health (or in the major social determinants of health) between groups with different levels of underlying social advantage/disadvantage—that is, wealth, power, or prestige.”

- Braverman & Gruskin, 2003

“Health equity is achieved when every person has the opportunity to ‘attain his or her full health potential’ and no one is ‘disadvantaged from achieving this potential because of social position or other socially determined circumstances.’”

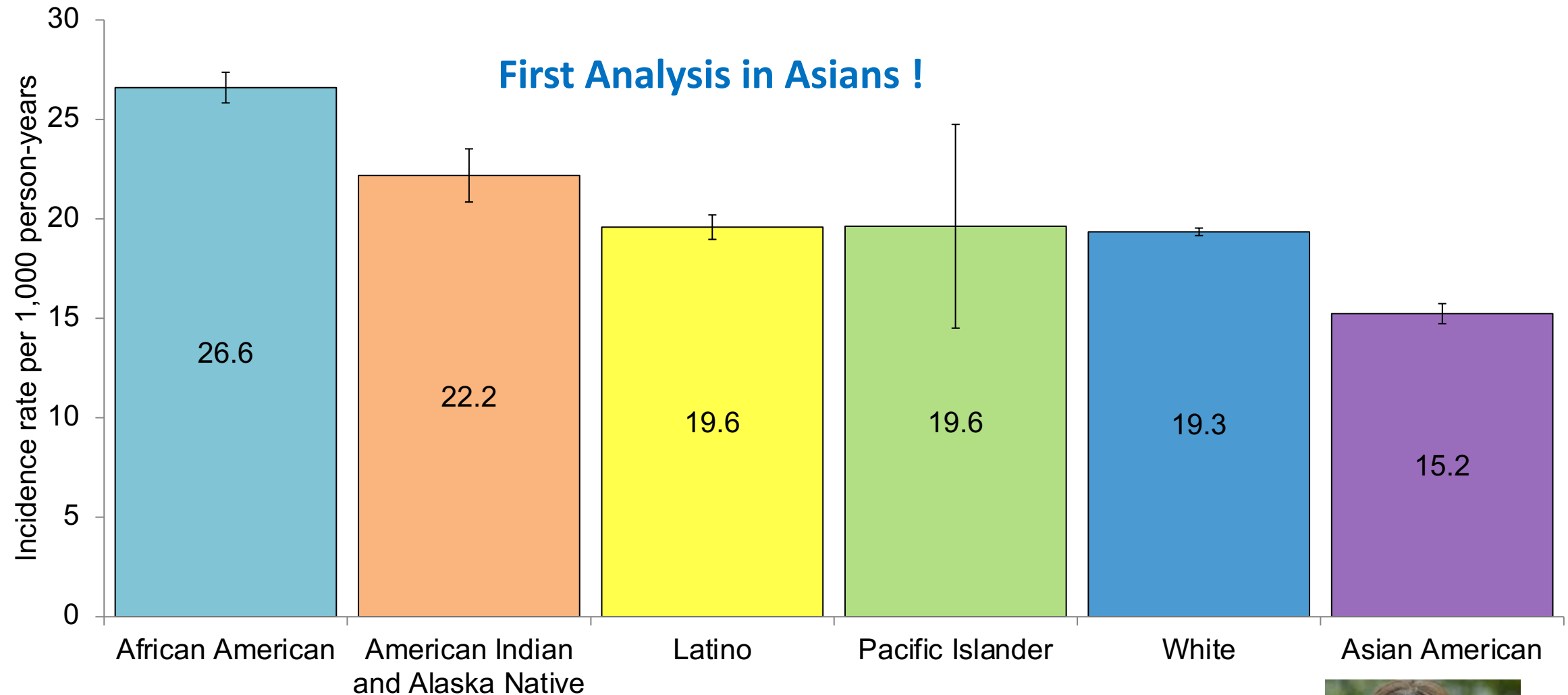
- Centers for Disease Control and Prevention

NIH Health Disparities Priority Populations

- Hispanics/Latinos
- •American Indians/Alaskan Natives
- •Blacks/African Americans
- •Asian Americans
- •Native Hawaiians and Other Pacific Islanders
- •Socioeconomically Disadvantaged Populations
- •Rural Populations
- •Disability Populations
- •Sexual and Gender Minorities
- •Others (low literacy , low levels of formal education)

**Hill, Perez-Stable, Anderson and Bernard, *Ethnicity and Disease*, 2015;
<https://www.nia.nih.gov/research/osp/framework>





Age-standardized dementia incidence rates by race/ethnicity, from 2000-2013 in 274,000 Kaiser members aged 65+



Inequalities in dementia incidence between six racial and ethnic groups over 14 years. *Alzheimers Dement.* 2016 Feb 10. Mayeda ER et al 2016



National Institute on Minority Health and Health Disparities Research Framework

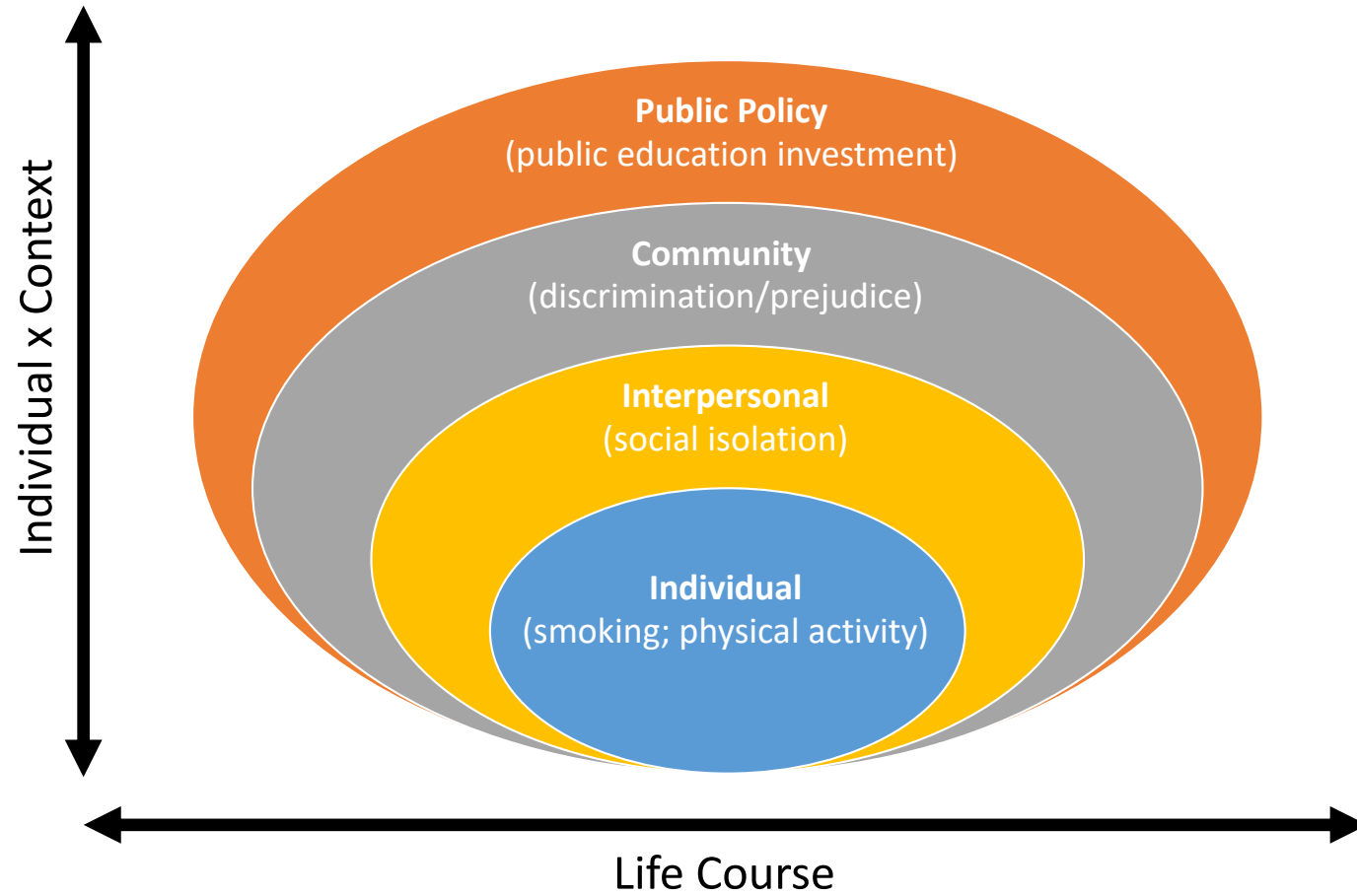
		Levels of Influence*			
		Individual	Interpersonal	Community	Societal
Domains of Influence (Over the Lifecourse)	Biological	Biological Vulnerability and Mechanisms	Caregiver–Child Interaction Family Microbiome	Community Illness Exposure Herd Immunity	Sanitation Immunization Pathogen Exposure
	Behavioral	Health Behaviors Coping Strategies	Family Functioning School/Work Functioning	Community Functioning	Policies and Laws
	Physical/Built Environment	Personal Environment	Household Environment School/Work Environment	Community Environment Community Resources	Societal Structure
	Sociocultural Environment	Sociodemographics Limited English Cultural Identity Response to Discrimination	Social Networks Family/Peer Norms Interpersonal Discrimination	Community Norms Local Structural Discrimination	Social Norms Societal Structural Discrimination
	Health Care System	Insurance Coverage Health Literacy Treatment Preferences	Patient–Clinician Relationship Medical Decision-Making	Availability of Services Safety Net Services	Quality of Care Health Care Policies
Health Outcomes		 Individual Health	 Family/ Organizational Health	 Community Health	 Population Health

National Institute on Minority Health and Health Disparities, 2018

*Health Disparity Populations: Race/Ethnicity, Low SES, Rural, Sexual and Gender Minority

Other Fundamental Characteristics: Sex and Gender, Disability, Geographic Region

Cumulative Advantage/Disadvantage



Underserved Populations have higher exposure to risk factors for poorer brain health over a LIFETIME

Low birth weight associated with increased dementia risk

Table 3. Hazard ratios for dementia diagnosis based on survival analyses in relation to birth characteristics.

Variable	Model 1		Model 2		Model 3		Model 4	
	HR (95% CI)	p-Value	HR (95% CI)	p-Value	HR (95% CI)	p-Value	HR (95% CI)	p-Value
BW (100 g)	0.98 (0.97–1.00) [†]	0.016	0.98 (0.97–0.99)	0.004	0.98 (0.97–0.99)	0.004	0.98 (0.97–0.99)	0.004
LBW	1.19 (1.04–1.36)	0.011	1.23 (1.07–1.41)	0.003	1.23 (1.07–1.41)	0.004	1.22 (1.07–1.40)	0.004
BWGA	0.92 (0.86–0.99)	0.017	0.91 (0.85–0.98)	0.008	0.91 (0.85–0.98)	0.008	0.91 (0.85–0.98)	0.008

Associations between birth characteristics and age-related cognitive impairment and dementia: A registry-based cohort study

Miriam A. Mosing^{1,2*}, Cecilia Lundholm¹, Sven Cnattingius³, Margaret Gatz^{1,4}, Nancy L. Pedersen^{1,5}

Place of birth has enduring consequences on risk of dementia in Kaiser Members

	Born outside a high stroke mortality state		Born in a high stroke mortality state	
	White	Black HR (95% CI)	White HR (95% CI)	Black HR (95% CI)
Age, sex, education and mid-and late- life cardiovascular risk	Ref	1.32 (1.13-1.54)	1.43 (1.20-1.70)	1.48 (1.31-1.68)

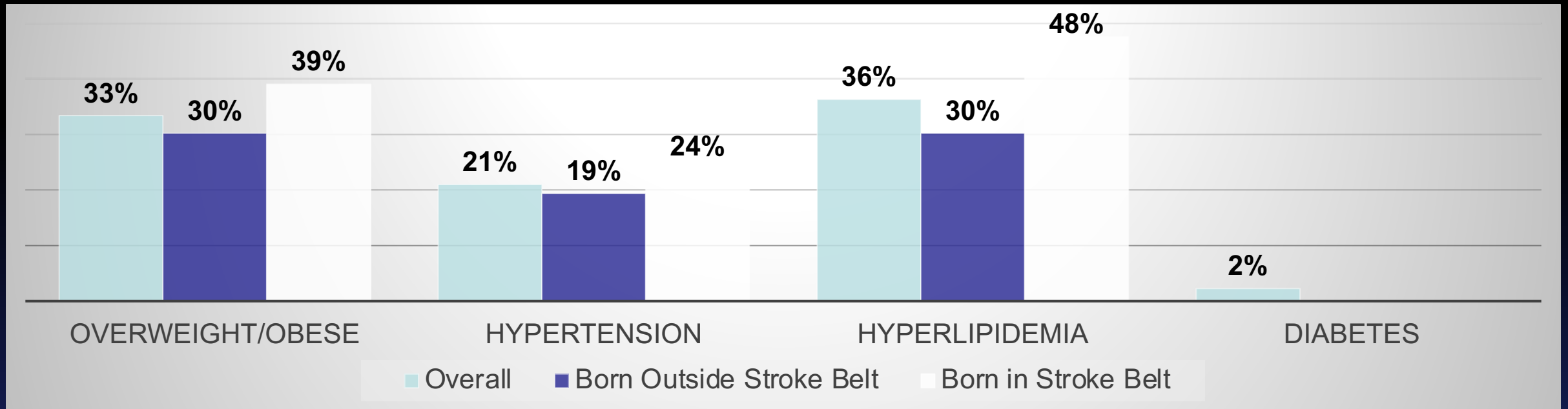
Midlife vascular risk factors are body mass index, smoking duration, and hypertension status. Late life cardiovascular risk includes diabetes, hypertension, heart failure, acute myocardial infarction, and stroke.

Gilsanz P, et al, JAMA: Neurology 2017



STAR: Cardiovascular risk factors: by birth region

Kristen George, PhD UC Davis



Disparities in Midlife Cardiovascular Risk Factors in Life After 90

Midlife Characteristic (Avg Age=44y)	All	Asian	Black	Latino	Multi/ Other	White
Hypertension (%)	20.3	23.4	26.7	12.5	42.4	11.9
Hyperlipidemia (%)	26.5	29.7	28.9	34.4	21.1	23.2
Overweight/Obese (%)	35.4	18.6	49.4	66.7	30.0	29.5
Ever smoker (%)	36.0	20.3	31.1	37.5	42.4	43.7

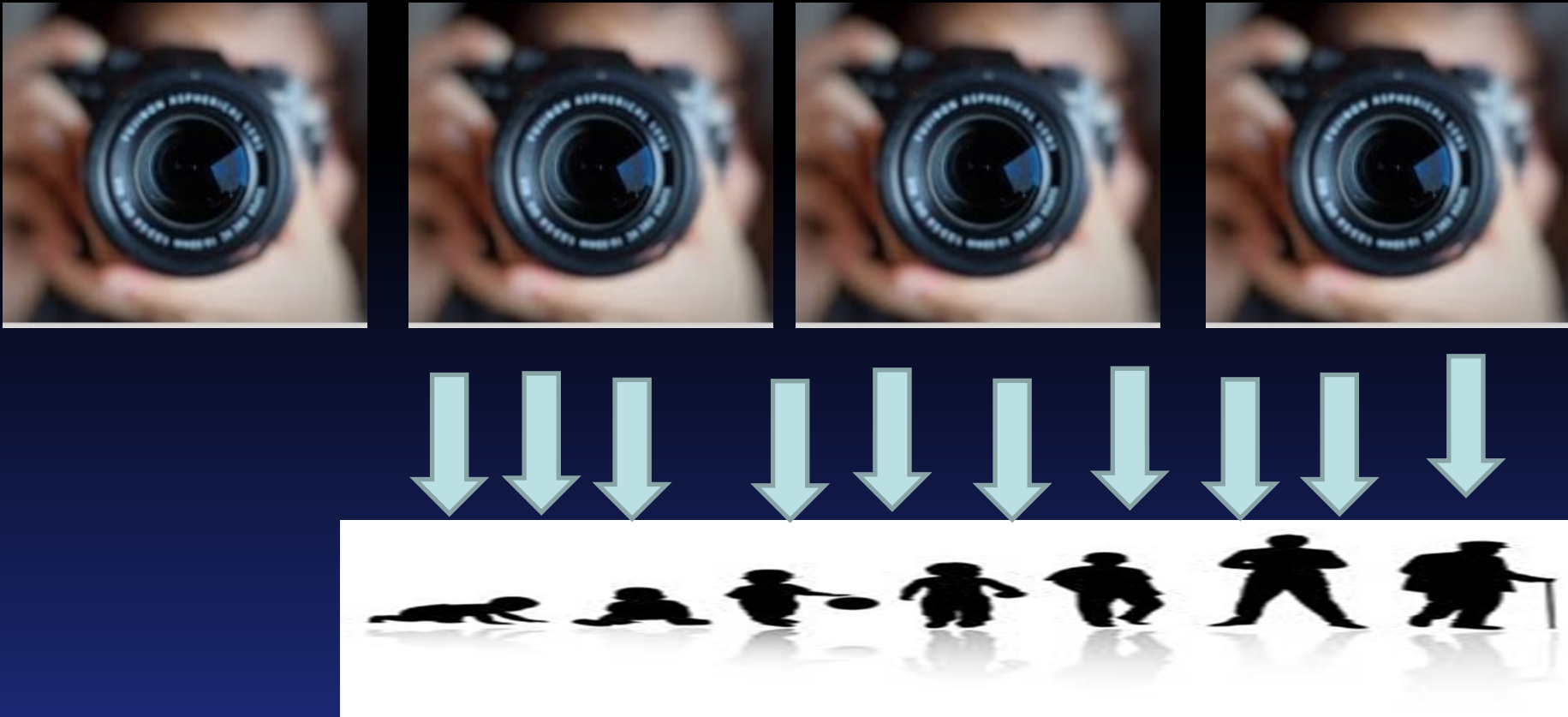
How can the ADRC Network Contribute ?

- Most studies get a snapshot look at exposures that affect ADRD risk



Primary and Secondary Data Collection

- Leveraging residential address to link to data sources



ADRC Network: Opportunities

- Air pollution
- Toxic chemicals
- Weather Patterns
- Crime Data
- Segregation
- Redlining
- Green Space
- Food Density
- Area Deprivation index



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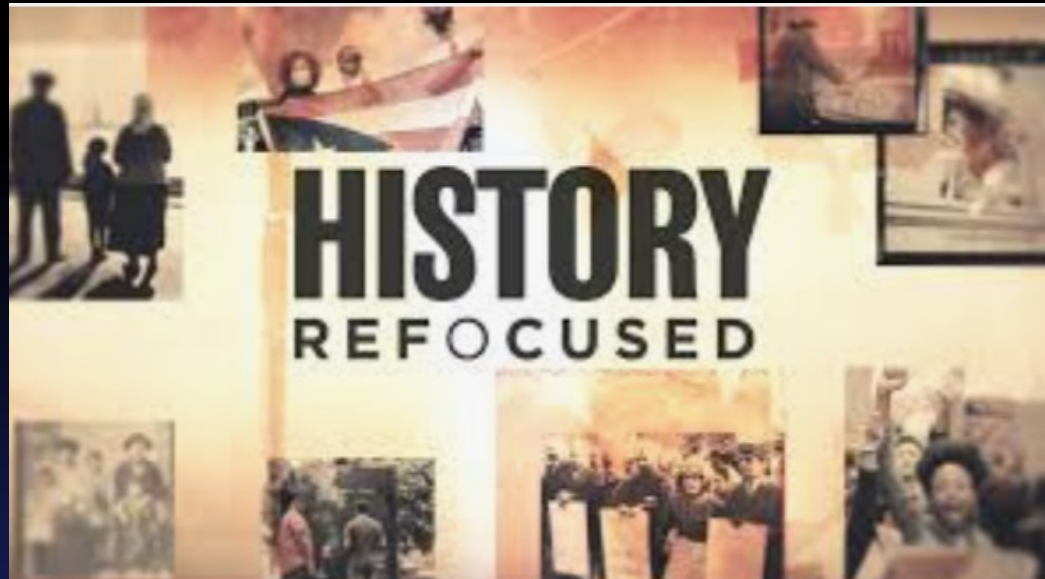
Challenges

- TRUST



Challenges

- HISTORY



Challenges

- TIME



Challenges

- MONEY



Challenges

- TRANSPORTATION



Challenges

- LOCATION – Academic medical centers



Challenges

- RETURN on INVESTMENT



Why did you decide to donate your brain to research?

If I can do anything to help someone why not? I want to help longevity and for those that are going to become 90. Your team asked me if I wanted to donate my brain, so I did a worthy call to help longevity.

-DM Age: 102 LA90 participant

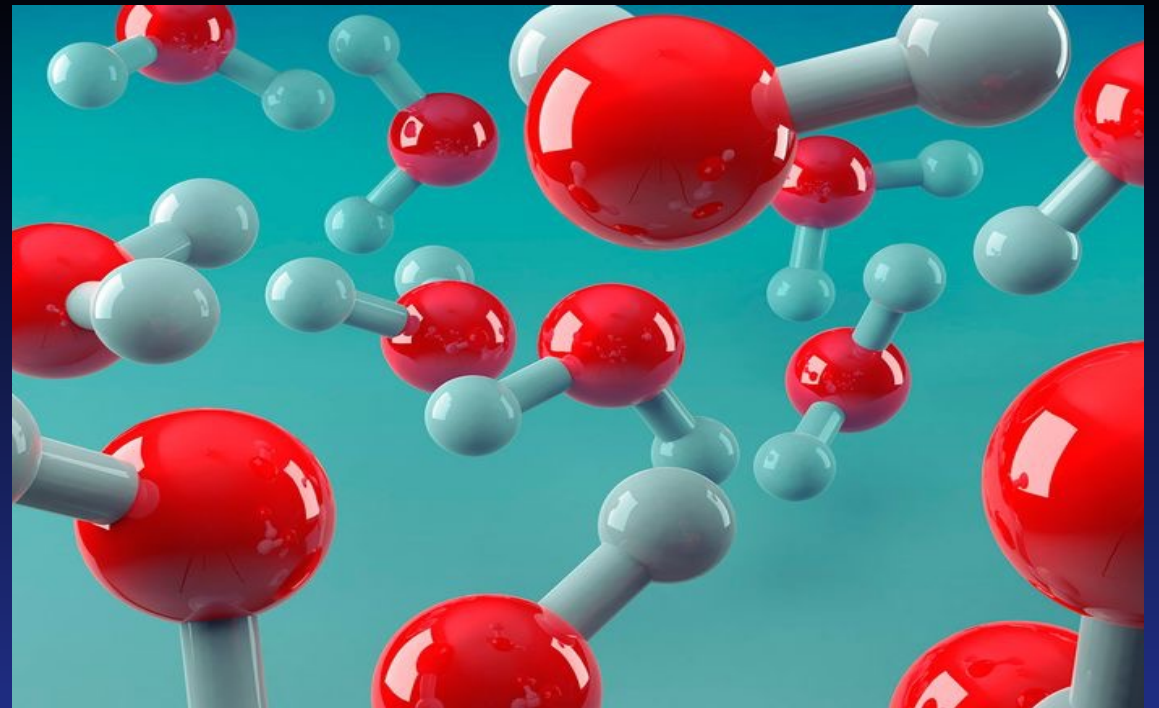
IRB

- Discussing benefits versus coercion?



Where to next ?

Science of Inclusion



Is it enough to increase inclusion? No

- Contextualize the research
- Demonstrates return to the community
- Engagement
- Appropriate compensation
- Access
- RESOURCES



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