

Implementing Alternatives to Race and Ethnicity in Research and Practice

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Disclosures

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Right patient, right test, right treatment, right time, right price



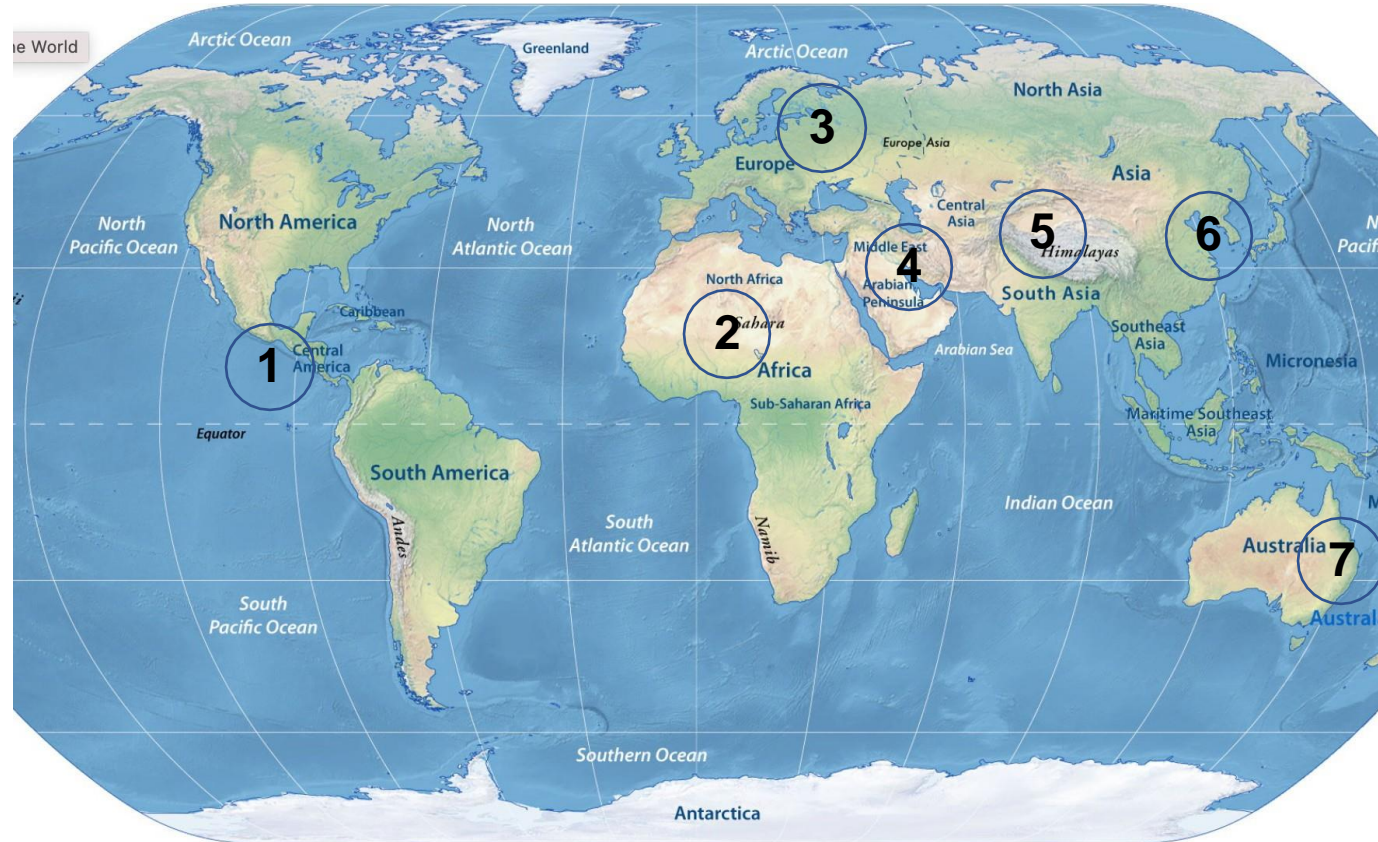
AMA recommendation 2020

Clinicians and researchers focus on genetics and biology, the experience of racism, and social determinants of health when describing risk factors for disease.

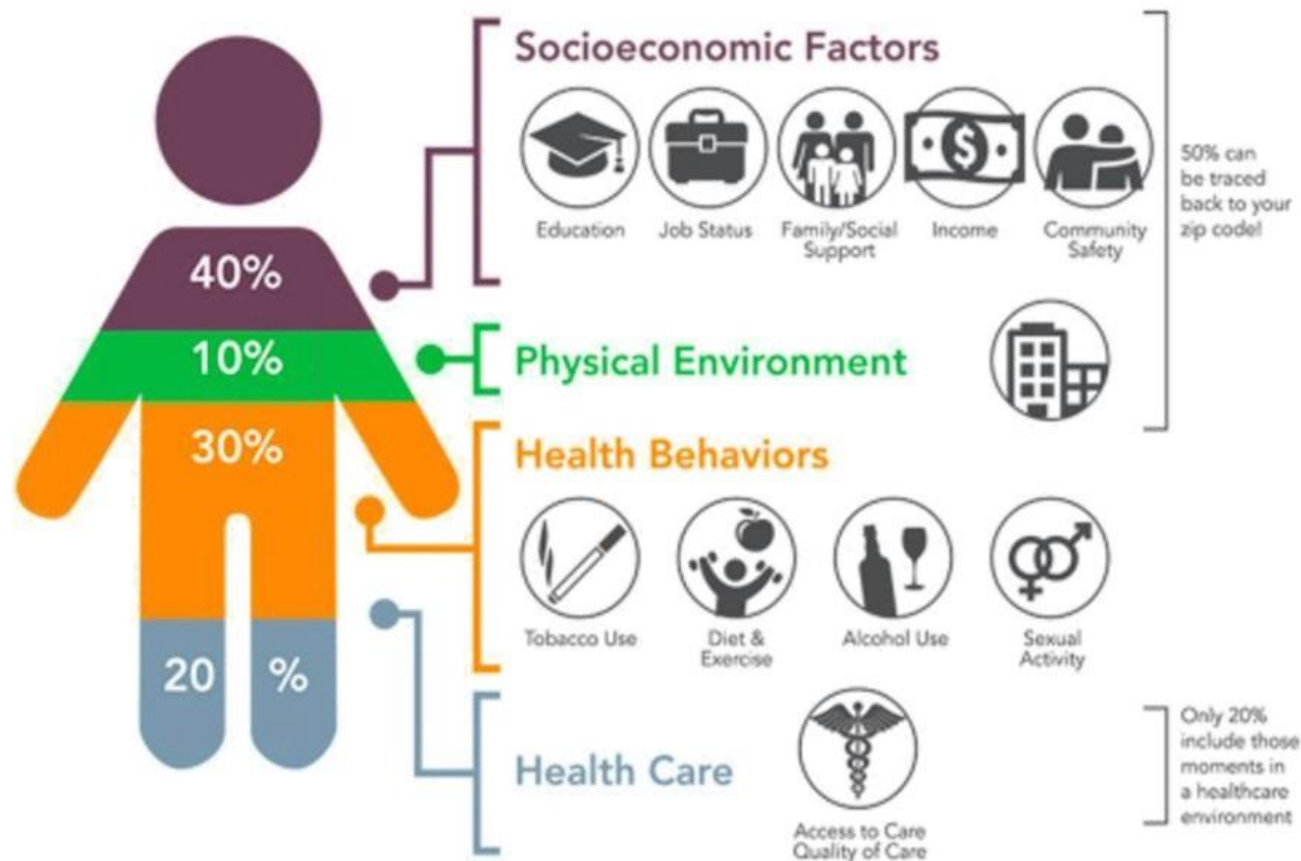


Operationalizing race in health equity

- Flawed as proxy for genetic predisposition



- 4000 alleles
- 92% in 2 or more regions
- 50% in all 7 regions
- Intergroup similarities >> intragroup
- Relevance of ancestry as a risk predictor



Zip code encoded risk

- Area deprivation indices
- Redlining
- Racialized Economic Marginalization
- Group isolation
- Gentrification
- Area racism

RWJF.2014

TAILORx: Unpacking “race”

STRUCTURAL MEASURES

- Area deprivation index/ neighborhood SES
- Segregation indices

PATIENT MEASURES

- Health-related social needs
- Behavior
- Ancestry/race
- Allostatic load

Oncotype DX RCT—**Key finding**: endotx vs chemoendotx, no diff for intermed risk (Sparano et al 2018)

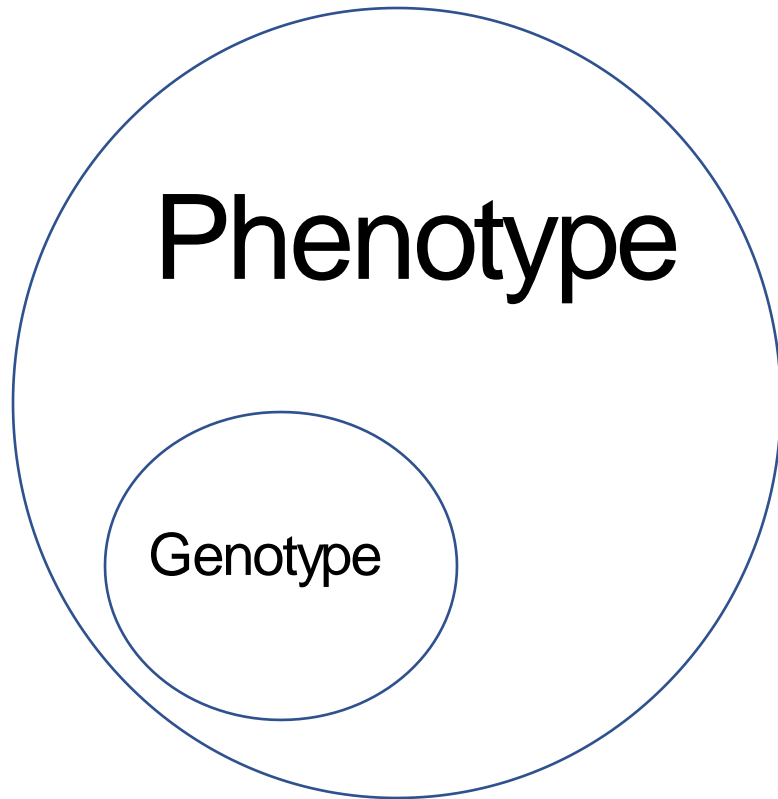
- **Sadigh et al 2021**: Black women more likely to adhere to adjuvant endocrine tx, controlling for nSES and insurance type
- **Albain et al 2021**: Black women had higher distant recurrence rates and lower overall survival, controlling for recurrence score and and comparable systemic therapy
- **Sadigh et al 2021**: Black women had worse outcomes, controlling for endocrine tx adherence, nSES, insurance

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2018

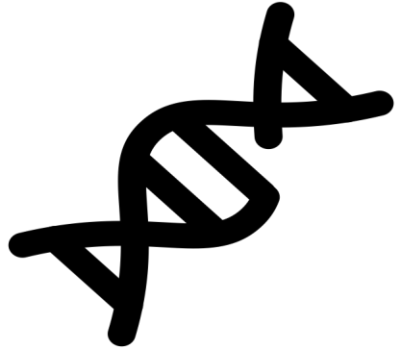
2021

AMA recommendation aspirational

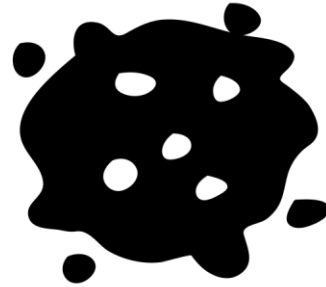


- Key trials exclude Asian-American ethnicities or declined to collect more granular data
- “Misclassify” individuals from Latin America contrary to self-reported “race”
- Operationalizing use of ancestry currently impractical
- Emerging models link social context to epigenetic processes not captured in ancestry

Mechanistic pathways of racism effects on health



Genomic/epigenomic changes:
Conserved transcription response to adversity (CTRA), DNA methylation, histone modification, RNA silencing, telomere shortening



Peri-tumoral environment: racial differences in peri-tumoral immune response, upregulation of genes involved in epithelial mesenchymal transition



Stress response: adversity associated with upregulation of genes involved in inflammation



Figure 1. The Path from Psychosocial Stress to Disease

HPA is an abbreviation for the hypothalamic-pituitary axis. SAM is the abbreviation for the sympathetic-adrenal medullary system.

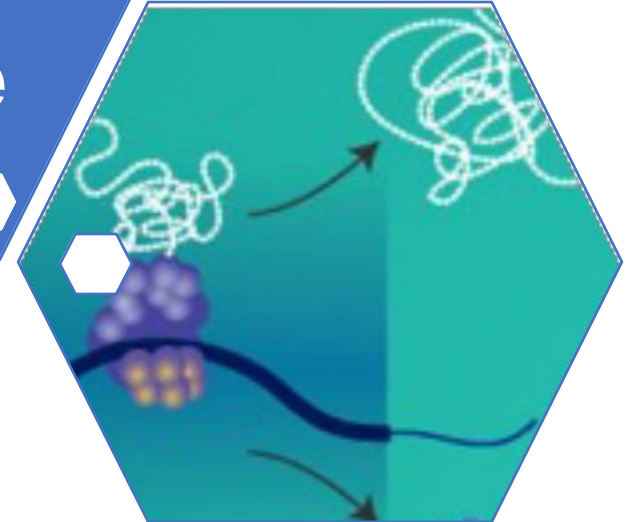
Duong et al, 2017

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Social
genomics

Equitable
Evidence-
based care



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