Research spotlight

Historical roots of race-based hypertension treatment: the self-fulfilling process of clinical race correction

Background

- Science shaped by a racial worldview (RWV) pervades healthcare decision-making, whether clinical decision support comes in the form of an algorithm or a set of professional treatment guidelines. For example:
  - The **Slavery Hypertension Hypothesis**, though lacking empirical evidence, suggests that during the slave trade, kidnapped Africans underwent a selection process during the Middle Passage due to heat stress, salt and water deprivation. The dangerous hypothesis posits that this led to "salt-saving renal-adrenal adaptations" and a predisposition to hypertension for Black patients.
  - The hypothesis has provided an evolutionary explanation for the observation that Black people have low renin and high salt sensitivity. Instead of investigating social determinants of health differences, this evolutionary hypothesis has justified the concept of a Black patient-specific physiology which is, in turn, used to justify differential healthcare treatment.
  - Biomarkers relevant to cardiac health and medication response, such as plasma renin activity (PRA) levels, vary within Black populations, and the distributions between Black and white populations largely overlap, yet the two populations have been treated as biologically distinct.
  - Differential racial treatment has been expressed in race-based guidelines such as the Eighth Joint National Committee (JNC 8) recommendations, which suggest different initial hypertension prescription treatments based on race, advising against ACE inhibitors as first-line therapy for Black patients.

Findings

- The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT) study significantly influenced the JNC 8 Evidence-Based Guideline for the Management of High Blood Pressure in Adults.
- ALLHAT focused on comparing drugs in African Americans, and researchers from UCLA and Harvard Medical School demonstrated how its design had several flaws, including poorly defined racial categories and a post hoc analysis that emphasized secondary outcomes that pointed toward racial differences.

- Dubious assumptions about biologically grounded, evolutionary racial differences shaped the study, reinforcing the idea of racial differences in patient health outcomes and leading to differential treatment recommendations.
- This RWV led the ALLHAT study team to expect to find racial differences, influencing the interpretation of the data. Furthermore, JNC 8 selectively used ALLHAT outcomes to create guidelines aligned with historical ideas of a Black patient-specific physiology, characterized by low renin and salt sensitivity.

Lessons learned

- ✔ Race-based guidelines such as JNC 8 have not reduced disparities in hypertension control. These guidelines recommend different drug treatments based on race, perpetuating the idea that race is a biological determinant.
- ✔ The JNC 8 guideline entrenches notions of differential biology between racial groups, highlighting the need to reject **racial essentialism** and embrace biocritical inquiry, structural competency, and race-conscious medicine.
- ✔ A move away from biological determinism toward focusing on the social and structural factors that contribute to health inequities is also needed.
    - "The ideology of race as a biologic determinant is bolstered when scientists fail to probe the basis of race-associated differences as though this basis were already completely understood." (Dr. Camara Jones, quoted in Savage & Panofsky, 2023)
- ✔ Researchers and clinicians must use alternative approaches that grapple with genetic and environmental factors to discern how specific aspects of a person or group's environment impact their health outcomes so that these can be mitigated.

Citations

1. Savage, L.C., & Panofsky, A. (2023). The self-fulfilling process of clinical race correction: The case of Eighth Joint National Committee recommendations. Health Equity, 7(1), 793–802.
2. Kaufman, Jay S.; Hall, Susan A.. The Slavery Hypertension Hypothesis: Dissemination and Appeal of a Modern Race Theory. Epidemiology 14(1):p 111-118, January 2003.
3. Holt, H. K., Gildengorin, G., Karliner, L., Fontil, V., Pramanik, R., & Potter, M. B. (2022). Differences in Hypertension Medication Prescribing for Black Americans and Their Association with Hypertension Outcomes. *Journal of the American Board of Family Medicine : JABFM*, *35*(1), 26–34. https://doi.org/10.3122/jabfm.2022.01.210276
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