

NUNM Bibliography: Implicit Bias in Healthcare

1) Evidence of Bias

School Suspensions: Are They Helping Children? Cambridge, MA: Washington Research Project, 1975.

Pager et al, *Discrimination in a Low-Wage Market*, *American Sociological Review*, 2009.

Girvan, Erik and Marek, Heather, *Psychological and Structural Bias in Civil Jury Awards*, 2016.

Reeves, Arin N, *Written in Black and White: Exploring Confirmation Bias in Racialized Perception of Writing Skills*, Nextions, 2014.

2) Impact of Implicit Bias

Rooth, Dan-Olof, *Automatic associations and discrimination in hiring: real-world evidence*, *Labour Economics*, 2010.

Aegerstrom, J and Rooth, Dan-Olof. *The Role of Automatic Obesity Stereotypes in Real Hiring Discrimination*, *Journal of Applied Psychology*, 2011.

Payne et al, *Implicit and explicit prejudice in the 2008 American presidential election*, *Journal of Experimental Social Psychology*, 2009.

Sabin, JA and Greenwald, AG, *The influence of implicit bias on treatment recommendations for 4 common pediatric conditions*, *American Journal of Public Health*, 2012.

3) Bias in Health Care

[Green et al., "Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients," *Journal of General Internal Medicine* 22\(9\), 2007.](#)

This study provides evidence that doctors with implicit biases treat patients unequally across race. All physicians in this study indicated explicitly that they prefer black and white patients equally, but IAT tests revealed a moderate to large preference for white patients. In particular, participants carried an unconscious association between black people and non-compliance, including non-compliance with medical advice. The study found a significant correlation between implicit bias scores and unequal treatment of patients with heart problems. The higher a doctor's level of implicit bias, the more likely they were to treat white patients but not black patients with coronary artery disease.

[Penner et al, "The Effects of Oncologist Implicit Racial Bias in Racially Discordant Oncology Interactions." *Journal of Clinical Oncology* 34\(24\), 2016.](#)

This study explores the impact of implicit bias on clinical interactions between white doctors and black cancer patients. Oncologist implicit bias was associated with shorter visit times and less supportive communication. Patients perceived unconsciously biased doctors as less patient-centered, remembered less of the interaction immediately after it ended, and expressed less confidence in recommended treatments.

[Van ryn, et al, "The Impact of Racism on Clinician Cognition, Behavior, and Clinical Decision Making." *Du Bois Review* 46\(2\), 2010.](#)

This paper provides an excellent overview of existing studies on the pervasiveness of implicit bias among medical professionals of all kinds, disparate physician treatment recommendations, and disparate health outcomes for people of color. Particularly enlightening is the concept of aversive racism, when a person has low levels of explicit bias and high levels of implicit bias; indicators include averted eye contact and other non-verbal expressions of racial anxiety. Significantly, black patients reported more negative outcomes with aversely racist physicians than physicians with high levels of explicit bias. Additionally, this study outlines a number of evidence-based methods to reduce bias in health care, including physician self-awareness; reducing physician stress; the use of objective procedures; and improving an organization's racial climate.

[Alexander, G. Caleb et al, "Development of a Measure of Physician Engagement in Addressing Racial and Ethnic Health Disparities." *Health Research and Educational Trust* 43\(2\), 2008.](#)

This article proposes criteria with which to measure physician investment in reducing racial health disparities. The criteria are split up into three categories: awareness, self-reflection, and action. They may be useful in recommending next steps to providers just learning about implicit bias or as a broader organizational assessment tool.