

Academic Emergency Medicine Editor-in-Chief Pick of the Month

Do Gender and Race Make a Difference in Acute Coronary Syndrome Pretest Probabilities in the Emergency Department?

Physicians routinely transform constellations of symptoms and test results into likely diagnoses via clinical decision-making, but the cognitive pathways underlying this process remain largely a mystery. In the emergency department (ED), the decision density is exorbitant so understanding diagnostic biases that potentially skew clinicians away from “the truth” is essential. Indeed, dozens of logical fallacies and cognitive error subtypes have been described, such as over-attachment to particular diagnoses, failure to consider alternative diagnoses, or misperceptions of disease prevalence. One of these cognitive errors involves attributing patient characteristics such as gender or race to disease likelihood.

Most of us would immediately protest any hint of biased medical decision-making based on our patient’s gender or race, but significant psychosocial research indicates that hidden prejudice exists in contemporary society. If you disagree, read the book “*Blindspot: Hidden Biases of Good People*” by Mahzarin Banaji and Anthony Greenwald (Bantam Books, 2016) and be sure to take the online tests that go along with the book to discover your unrecognized biases.

So, acknowledging that medicine is practiced by imperfect clinicians whose methods vary in transforming presenting complaints of individual patients into differential diagnoses and ED management plans, Kline et al. answer a poignant question in this study: Do clinicians’ estimates of acute coronary syndrome (ACS) likelihood vary according to gender or minority race? More importantly, if estimates of ACS are biased downwards based on gender or race, do these individuals receive less diagnostic testing and suffer preventable harms because of these cognitive biases?

The short answer is that ED clinicians do tend to underestimate the probability of ACS in women and minorities, but this underestimation does

not translate into health disparities as measured by less definitive testing or more downstream harms from under-diagnosis. As acknowledged by the authors, this secondary analysis is only hypothesis-generating and requires additional research to be conclusive, but for now this work indicates that the “black box” of cognitive decision-making is even murkier than previously believed. Hopefully, future investigations will elucidate whether these cognitive biases produce patient-centric harms in ACS patients.

Best Regards,

Christopher Carpenter, MD, MSc, FACEP, FAAEM, AGSF

Deputy Editor, *Academic Emergency Medicine*

Director of EBM for the Division of EM Medicine at Washington University
in St. Louis