

**The More Things Change  
The More They Stay the Same**

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“ If I am not for myself, who will be for me? If I am only for myself, what am I? And if not now, when? ”

Rabbi Hillel

# Who Gets What and When Do They Get it ??

- ▶ Not a new question
- ▶ 1961 - Admissions and Policies Committee of the Seattle Artificial Kidney Center at Swedish Hospital - AKA → “The God Committee”
  - ▶ Committee of 7 (lawyer, minister, banker, “housewife”, state government official, labor leader and surgeon
  - ▶ Created in part to shield doctors from psychological trauma of choosing

# 1961 “The God Committee”

- ▶ Concepts introduced
  - ▶ Anonymity of committee members
  - ▶ Anonymity of patients - no name
  - ▶ Social worth - leaned toward economic status (reflective of bias and own values)
  - ▶ Age limits

HOUSEWIFE: If we are still looking for the men with the highest potential of service to society, then I think we must consider that the chemist and the accountant have the finest educational backgrounds of all five candidates....

“LAWYER: Both these men have made provisions so that their deaths will not force their families to become a burden on society.

“STATE OFFICIAL: But that would seem to be placing a penalty on the very people who have perhaps been most provident....

“SURGEON: How do the rest of you feel about Number Three—the small businessman with three children? I am impressed that his doctor took special pains to mention that this man is active in church work. This is an indication to me of character and moral strength....

“LAWYER: It would also help him endure a lingering death.....

“MINISTER: Perhaps one man is more active in church work than another because he belongs to a more active church.

“LABOR LEADER: For the children’s sake, we’ve got to reckon with the surviving parent’s opportunity to remarry, and a woman with three children has a better chance to find a new husband than a very young widow with six children.”

-- Health Affairs

# Ongoing Resource Allocation Decisions

- ▶ Organ Transplantation: UNOS
  - ▶ “We are the private, non-profit organization that manages the nation's organ transplant system under contract with the federal government”
  - ▶ “the equitable allocation of cadaveric organs.”

# Organ Transplantation: continued

- ▶ “However, we must acknowledge as a transplant community that racial disparities continue to exist in transplantation, as evidenced in several recent publications including the Clinical Journal of the American Society of Nephrology, Surgery, the American Journal of Transplantation, and the Journal of the American Medical Association. The reasons for these disparities are medically and socially complex, and we must continually strive to reduce these inequities.”



# Disparities and Inequities

“Although the proportion of Black and Hispanic patients listed for cardiac transplantation have increased, significant disparities remain. Compared with White patients, Black patients were less likely to be transplanted, even with the new allocation system, and had a higher risk of post-transplantation death.”

<https://doi.org/10.1161/JAHA.120.021067>

## Disparities and Inequities (2)

“Black and Latinx patients were less likely to be admitted to cardiology for HF care. This inequity may, in part, drive racial inequities in HF outcomes.”

<https://doi.org/10.1161/CIRCHEARTFAILURE.119.006214>

# Barriers to Access?



# Structural Racism in Medicine

- ▶ “Structural racism refers to the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care and criminal justice. These patterns and practices in turn reinforce discriminatory beliefs, values and distribution of resources, according to Zinzi Bailey, ScD, MSPH, et al.1” - AMA
- ▶ ”“Racism is embedded into our educational, health care, political and our health department systems.”” - <https://www.ama-assn.org/delivering-care/health-equity/what-structural-racism>

# Racial Bias and False Beliefs

- ▶ Historical and contemporary belief that there are biological differences between Blacks and whites
- ▶ Can be traced back to the period of slavery
  - *Life in Georgia: A Narrative of the Life, Sufferings, and Escape of John Brown, a Fugitive Slave, Now in England* - 1855
  - Sold to a slave speculator named Thomas Stevens and eventually loaned to a Doctor Hamilton as payment for a debt.
  - Subjected to medical experimentation including the inducement of heat stroke and the measurement of skin thickness



# Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

- ▶ Study published in The Proceedings of the National Academy of Sciences
- ▶ [https://www.pnas.org/doi/10.1073/pnas.1516047113?url\\_ver=Z39.88-2003&rfr\\_id=ori:rid:crossref.org&rfr\\_dat=cr\\_pub%20%20pubmed](https://www.pnas.org/doi/10.1073/pnas.1516047113?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed)
- ▶ Study showed that medical students and residents held false beliefs about biological differences between Blacks and whites
- ▶ These false beliefs led to biased pain assessments and treatment recommendations



Item	Study 1: Online sample (n = 92)	Study 2			
		First years (n = 63)	Second years (n = 72)	Third years (n = 59)	Residents (n = 28)
Blacks age more slowly than whites	23	21	28	12	14
Blacks' nerve endings are less sensitive than whites'	20	8	14	0	4
Black people's blood coagulates more quickly than whites'	39	29	17	3	4
Whites have larger brains than blacks	12	2	1	0	0
Whites are less susceptible to heart disease than blacks*	43	63	83	66	50
Blacks are less likely to contract spinal cord diseases*	42	46	67	56	57
Whites have a better sense of hearing compared with blacks	10	3	7	0	0
Blacks' skin is thicker than whites'	58	40	42	22	25
Blacks have denser, stronger bones than whites*	39	25	78	41	29
Blacks have a more sensitive sense of smell than whites	20	10	18	3	7
Whites have a more efficient respiratory system than blacks	16	8	3	2	4
Black couples are significantly more fertile than white couples	17	10	15	2	7
Whites are less likely to have a stroke than blacks*	29	49	63	44	46
Blacks are better at detecting movement than whites	18	14	15	5	11



# Race Correction in Medicine

“Hidden in Plain Sight –  
Reconsidering the Use of Race  
Correction in Clinical Algorithms”

N Engl J Med 2020; 383:874-882

**Table 1. Examples of Race Correction in Clinical Medicine.\***

Tool and Clinical Utility	Input Variables	Use of Race	Equity Concern
<b>Cardiology</b>			
<p>The American Heart Association's Get with the Guidelines–Heart Failure<sup>9</sup> (<a href="https://www.mdcalc.com/gwtg-heart-failure-risk-score">https://www.mdcalc.com/gwtg-heart-failure-risk-score</a>)</p> <p><i>Predicts in-hospital mortality in patients with acute heart failure. Clinicians are advised to use this risk stratification to guide decisions regarding initiating medical therapy.</i></p>	<p>Systolic blood pressure Blood urea nitrogen Sodium Age Heart rate History of COPD Race: black or nonblack</p>	<p>Adds 3 points to the risk score if the patient is identified as nonblack. This addition increases the estimated probability of death (higher scores predict higher mortality).</p>	<p>The original study envisioned using this score to "increase the use of recommended medical therapy in high-risk patients and reduce resource utilization in those at low risk."<sup>9</sup> The race correction regards black patients as lower risk and may raise the threshold for using clinical resources for black patients.</p>
<b>Cardiac surgery</b>			
<p>The Society of Thoracic Surgeons Short Term Risk Calculator<sup>10</sup> (<a href="http://riskcalc.sts.org/stswebriskcalc/calculate">http://riskcalc.sts.org/stswebriskcalc/calculate</a>)</p> <p><i>Calculates a patient's risks of complications and death with the most common cardiac surgeries. Considers &gt;60 variables, some of which are listed here.</i></p>	<p>Operation type Age and sex Race: black/African American, Asian, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, or "Hispanic, Latino or Spanish ethnicity"; white race is the default setting. BMI</p>	<p>The risk score for operative mortality and major complications increases (in some cases, by 20%) if a patient is identified as black. Identification as another non-white race or ethnicity does not increase the risk score for death, but it does change the risk score for major complications such as renal failure, stroke, and prolonged ventilation.</p>	<p>When used preoperatively to assess a patient's risk, these calculations could steer minority patients, deemed higher risk, away from these procedures.</p>
<b>Nephrology</b>			
<p>Estimated glomerular filtration rate (eGFR) MDRD and CKD-EPI equations<sup>11</sup> (<a href="https://ukidney.com/nephrology-resources/egfr-calculator">https://ukidney.com/nephrology-resources/egfr-calculator</a>)</p> <p><i>Estimates glomerular filtration rate on the basis of a measurement of serum creatinine.</i></p>	<p>Serum creatinine Age and sex Race: black vs. white or other</p>	<p>The MDRD equation reports a higher eGFR (by a factor of 1.210) if the patient is identified as black. This adjustment is similar in magnitude to the correction for sex (0.742 if female).</p> <p>The CKD-EPI equation (which included a larger number of black patients in the study population), proposes a more modest race correction (by a factor of 1.159) if the patient is identified as black. This correction is larger than the correction for sex (1.018 if female).</p>	<p>Both equations report higher eGFR values (given the same creatinine measurement) for patients identified as black, suggesting better kidney function. These higher eGFR values may delay referral to specialist care or listing for kidney transplantation.</p>
<p>Organ Procurement and Transplantation Network: Kidney Donor Risk Index (KDRI)<sup>12</sup> (<a href="https://optn.transplant.hrsa.gov/resources/allocation-calculators/kdpi-calculator/">https://optn.transplant.hrsa.gov/resources/allocation-calculators/kdpi-calculator/</a>)</p> <p><i>Estimates predicted risk of donor kidney graft failure, which is used to predict viability of potential kidney donor.†</i></p>	<p>Age Hypertension, diabetes Serum creatinine level Cause of death (e.g., cerebrovascular accident) Donation after cardiac death Hepatitis C Height and weight HLA matching Cold ischemia En bloc transplantation Double kidney transplantation Race: African American</p>	<p>Increases the predicted risk of kidney graft failure if the potential donor is identified as African American (coefficient, 0.179), a risk adjustment intermediate between those for hypertension (0.126) and diabetes (0.130) and that for elevated creatinine (0.209–0.220).</p>	<p>Use of this tool may reduce the pool of African-American kidney donors in the United States. Since African-American patients are more likely to receive kidneys from African-American donors, by reducing the pool of available kidneys, the KDRI could exacerbate this racial inequity in access to kidneys for transplantation.</p>

## Obstetrics

Vaginal Birth after Cesarean (VBAC) Risk Calculator<sup>13,14</sup> (<https://mfmunetwork.bsc.gwu.edu/PublicBSC/MFMU/VGBirthCalc/vagbirth.html>)

*Estimates the probability of successful vaginal birth after prior cesarean section. Clinicians can use this estimate to counsel people who have to decide whether to attempt a trial of labor rather than undergo a repeat cesarean section.*

Age  
BMI  
Prior vaginal delivery  
Prior VBAC  
Recurring indication for cesarean section  
African-American race  
Hispanic ethnicity

The African-American and Hispanic correction factors subtract from the estimated success rate for any person identified as black or Hispanic. The decrement for black (0.671) or Hispanic (0.680) is almost as large as the benefit from prior vaginal delivery (0.888) or prior VBAC (1.003).

The VBAC score predicts a lower chance of success if the person is identified as black or Hispanic. These lower estimates may dissuade clinicians from offering trials of labor to people of color.

## Urology

STONE Score<sup>15,16</sup>

*Predicts the risk of a ureteral stone in patients who present with flank pain*

Sex  
Acute onset of pain  
Race: black or nonblack  
Nausea or vomiting  
Hematuria

Produces a score on a 13-point scale, with a higher score indicating a higher risk of a ureteral stone; 3 points are added for nonblack race. This adjustment is the same magnitude as for hematuria.

By systematically reporting lower risk for black patients than for all nonblack patients, this calculator may steer clinicians away from aggressive evaluations of black patients.

Urinary tract infection (UTI) calculator<sup>17</sup> (<https://uticalc.pitt.edu/>)

*Estimates the risk of UTI in children 2–23 months of age to guide decisions about when to pursue urine testing for definitive diagnosis*

Age <12 months  
Maximum temperature >39°C  
Race: Describes self as black (fully or partially)  
Female or uncircumcised male  
Other fever source

Assigns a lower likelihood of UTI if the child is black (i.e., reports a roughly 2.5-times increased risk in patients who do not describe themselves as black).

By systematically reporting lower risk for black children than for all nonblack children, this calculator may deter clinicians from pursuing definitive diagnostic testing for black children presenting with symptoms of UTI.

## Oncology

Rectal Cancer Survival Calculator<sup>18</sup> (<http://www3.mdanderson.org/app/medcalc/index.cfm?pagename=rectumcancer>)

*Estimates conditional survival 1–5 years after diagnosis with rectal cancer*

Age and sex  
Race: white, black, other  
Grade  
Stage  
Surgical history

White patients are assigned a regression coefficient of 1, with higher coefficients (depending on stage) assigned to black patients (1.18–1.72).

The calculator predicts that black patients will have shorter cancer-specific survival from rectal cancer than white patients. Clinicians might be more or less likely to offer interventions to patients with lower predicted survival rates.

National Cancer Institute Breast Cancer Risk Assessment Tool (<https://bcrisktool.cancer.gov/calculator.html>)

*Estimates 5-year and lifetime risk of developing breast cancer, for women without prior history of breast cancer, DCIS, or LCIS.*

Current age, age at menarche, and age at first live birth  
First-degree relatives with breast cancer  
Prior benign biopsies, atypical biopsies  
Race/ethnicity: white, African American, Hispanic/Latina, Asian American, American Indian/Alaska Native, unknown

The calculator returns lower risk estimates for women who are African American, Hispanic/Latina, or Asian American (e.g., Chinese).

Though the model is intended to help conceptualize risk and guide screening decisions, it may inappropriately discourage more aggressive screening among some groups of nonwhite women.



**Table 1. (Continued.)**

Tool and Clinical Utility	Input Variables	Use of Race	Equity Concern
<p>Breast Cancer Surveillance Consortium Risk Calculator<sup>19</sup> (<a href="https://tools.bcscc.org/BC5yearRisk/calculator.htm">https://tools.bcscc.org/BC5yearRisk/calculator.htm</a>)</p> <p><i>Estimates 5- and 10-yr risk of developing breast cancer in women with no previous diagnosis of breast cancer, DCIS, prior breast augmentation, or prior mastectomy</i></p>	<p>Age Race/ethnicity: white, black, Asian, Native American, other/multiple races, unknown BIRADS breast density score First-degree relative with breast cancer Pathology results from prior biopsies</p>	<p>The coefficients rank the race/ethnicity categories in the following descending order of risk: white, American Indian, black, Hispanic, Asian.</p>	<p>Returns lower risk estimates for all nonwhite race/ethnicity categories, potentially reducing the likelihood of close surveillance in these patients.</p>
<b>Endocrinology</b>			
<p>Osteoporosis Risk SCORE (Simple Calculated Osteoporosis Risk Estimation)<sup>20</sup> (<a href="https://www.mdapp.co/osteoporosis-risk-score-calculator-316/">https://www.mdapp.co/osteoporosis-risk-score-calculator-316/</a>)</p> <p><i>Determines whether a woman is at low, moderate, or high risk for low bone density in order to guide decisions about screening with DXA scan</i></p>	<p>Rheumatoid arthritis History of fracture Age Estrogen use Weight Race: black or not black</p>	<p>Assigns 5 additional points (maximum score of 50, indicating highest risk) if the patient is identified as nonblack</p>	<p>By systematically lowering the estimated risk of osteoporosis in black patients, SCORE may discourage clinicians from pursuing further evaluation (e.g., DXA scan) in black patients, potentially delaying diagnosis and intervention.</p>
<p>Fracture Risk Assessment Tool (FRAX)<sup>21</sup> (<a href="https://www.sheffield.ac.uk/FRAX/tool.aspx">https://www.sheffield.ac.uk/FRAX/tool.aspx</a>)</p> <p><i>Estimates 10-yr risk of a hip fracture or other major osteoporotic fracture on the basis of patient demographics and risk-factor profile. Calculators are country-specific.‡</i></p>	<p>Age and sex Weight and height Previous fracture Parent who had a hip fracture Current smoking Glucocorticoid use Rheumatoid arthritis Secondary osteoporosis Alcohol use, ≥3 drinks per day Femoral neck bone mineral density</p>	<p>The U.S. calculator returns a lower fracture risk if a female patient is identified as black (by a factor of 0.43), Asian (0.50), or Hispanic (0.53). Estimates are not provided for Native American patients or for multiracial patients.</p>	<p>The calculator reports 10-yr risk of major osteoporotic fracture for black women as less than half that for white women with identical risk factors. For Asian and Hispanic women, risk is estimated at about half that for white women. This lower risk reported for nonwhite women may delay intervention with osteoporosis therapy.</p>
<b>Pulmonology</b>			
<p>Pulmonary-function tests<sup>22</sup></p> <p><i>Uses spirometry to measure lung volume and the rate of flow through airways in order to diagnose and monitor pulmonary disease</i></p>	<p>Age and sex Height Race/ethnicity</p>	<p>In the U.S., spirometers use correction factors for persons labeled as black (10–15%) or Asian (4–6%).</p>	<p>Inaccurate estimates of lung function may result in the misclassification of disease severity and impairment for racial/ethnic minorities (e.g., in asthma and COPD).<sup>23</sup></p>

\* BIRADS denotes Breast Imaging Reporting and Data System, BMI body-mass index (the weight in kilograms divided by the square of the height in meters), CKD-EPI Chronic Kidney Disease Epidemiology Collaboration, COPD chronic obstructive pulmonary disease, DCIS ductal carcinoma in situ, DXA dual-energy x-ray absorptiometry, LCIS lobular carcinoma in situ, and MDRD Modification of Diet in Renal Disease study.

† The current calculator uses Ethnicity/Race, with the following options: American Indian or Alaska Native, Asian, Black or African American, Hispanic/Latino, Native Hawaiian or Other Pacific Islander, White, and Multiracial.

‡ Three countries' calculators are further subcategorized by race, ethnicity, or location: China (Mainland China, Hong Kong), Singapore (Chinese, Malay, Indian), and the United States (Caucasian, black, Hispanic, Asian).

“ For healthcare preparedness, key considerations include defining infection control precautions for evaluating and handling patients with respiratory illness in the outpatient and inpatient setting, educating and training clinicians on clinical features of .... and appropriate use of personal protective equipment, and building strong partnerships and collaborations between the clinical and public health communities, including cross-training staff in the areas of infection control and public health. Furthermore, issues of resource allocation and surge capacity in the event of a major .... epidemic should be addressed. ”

“ Oregon will have established a health system that creates health equity when all people can reach their full health potential and well-being and are not disadvantaged by their race, ethnicity, language, disability, age, gender, gender identity, sexual orientation, social class, intersections among these communities or identities, or other socially determined circumstances. ”

Achieving health equity requires the ongoing collaboration of all regions and sectors of the state, including tribal governments to address:

The equitable distribution or redistribution of resources and power; and

Recognizing, reconciling and rectifying historical and contemporary injustices.

“

On some positions cowardice asks the question, is it safe? Expediency asks the question, is it politic? Vanity asks the question, is it popular? But conscience asks the question, is it right? And there comes a time when one must take a position that is neither safe, nor politic, nor popular but he must take it because conscience tells him it is right.

”

‘A Proper Sense of Priorities’

- Martin Luther King, Jr.

**Thank You!**