ALASKA HOSPITAL & HEALTHCARE ASSOCIATION

Understanding Diversity, Equity, and Inclusion in Healthcare

Joel Bervell, MS | Elson S. Floyd College of Medicine, Washington State University

DISCLOSURES

No disclosures.

FOLLOW ON
INSTAGRAM & TIKTOK
@JOELBERVELL

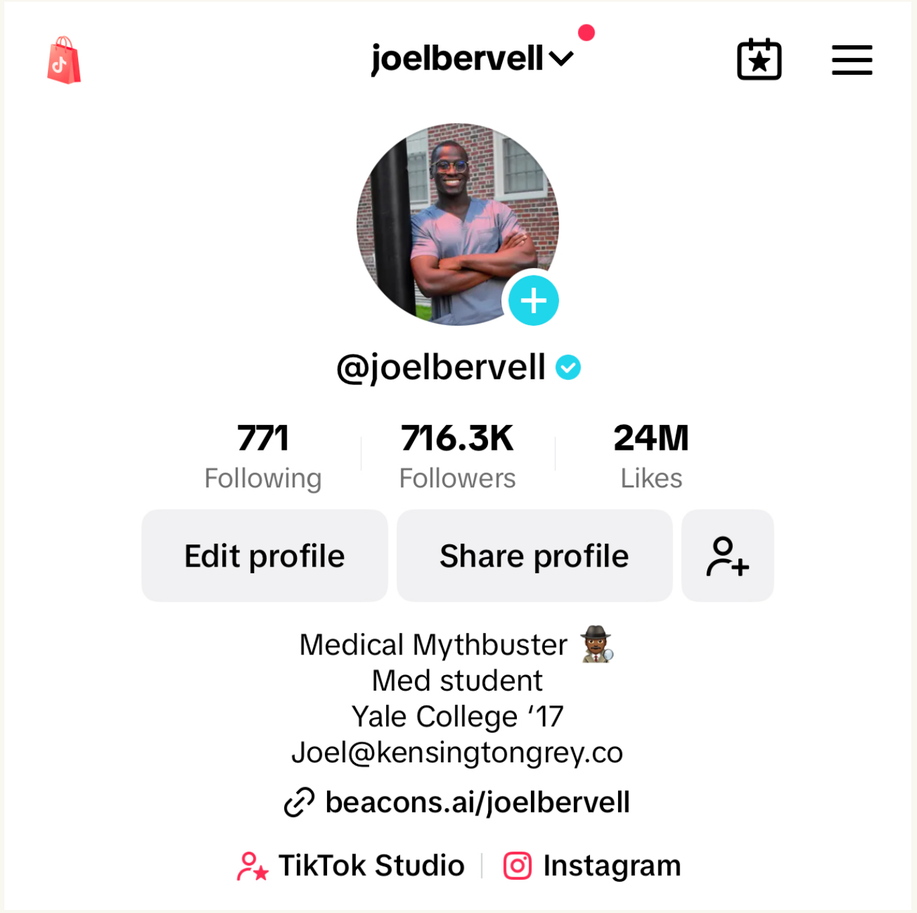
WHO AM I?

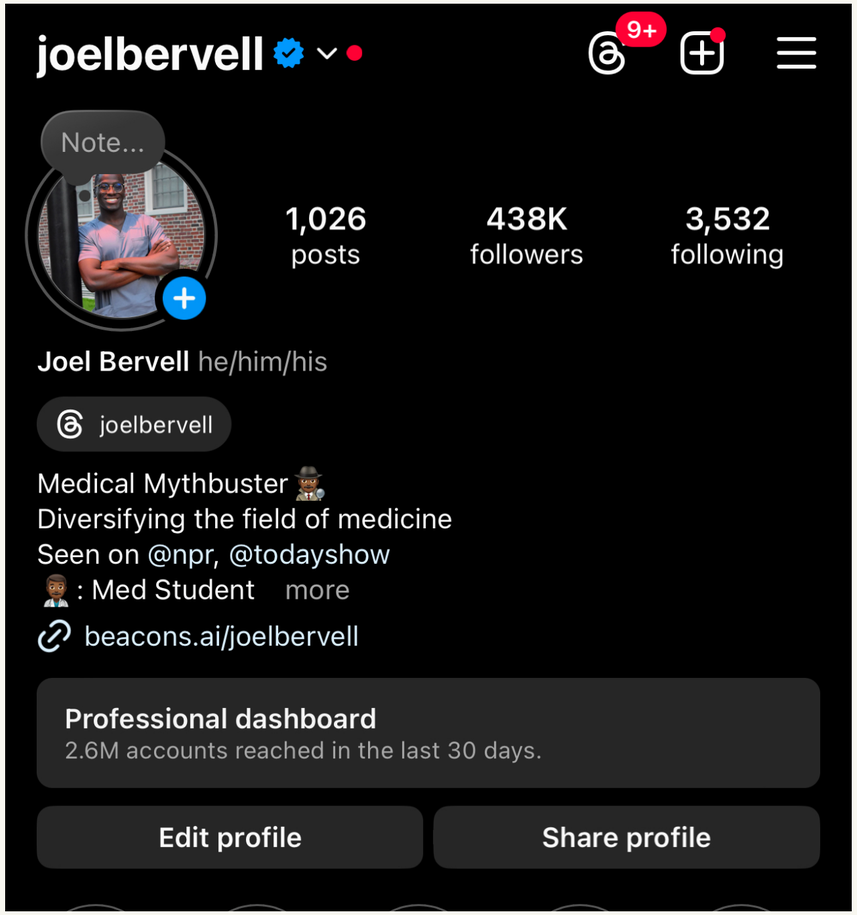
JOEL BERVELL

- Ghanaian -American Medical Student
- Science Communicator (Host of The Dose podcast)
- Medical Mythbuster (1.2M+ across social media)
- 2024 TED Fellow
- Forbes 30 Under 30 Seattle
- 40 Under 40 Leader in Minority Health
- Council for Responsible Social Media Member
- TikTok Diversity Council/ TikTok's Top 2021 Voice for Change
- White House Roundtable for Healthcare Leaders in Social Media

WHO AM I?

JOEL BERVELL





OBJECTIVES

- *Examine* how medicine has been both complicit and a reflection of inequities in our society.
- *Understand* the history and use of "race -based medicine" and how in present -day it continues to impact the care that patients receive.
- *Understand* the best practices informed by new research into practice to ensure people of all backgrounds and skin tones can receive the best care possible.
- *Analyze* solutions to maintaining health equity from a hospital, public health & medical standpoint.

Identifying the source of the problems

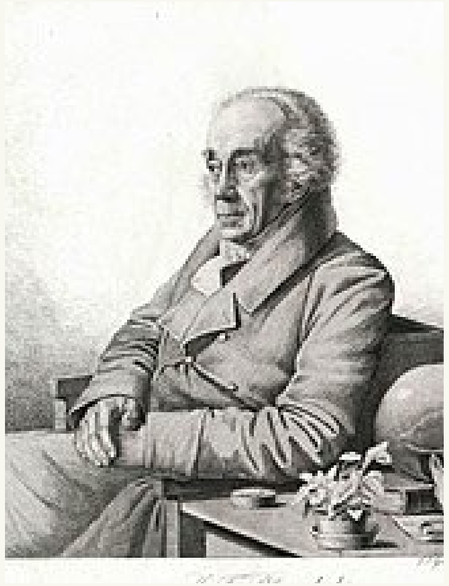
FROM THE HISTORICAL PAST TO PRESENT DAY, MEDICAL DISPARITIES ARE PART OF AN ONGOING NARRATIVE.

- How have racial biases rolled over into today's medical practice; how does history impact care now?
- What are some examples of how medical education, and even hospitals perpetuate these disparities?

The Scientists Who Defined Race

FROM THE HISTORICAL PAST TO PRESENT DAY, MEDICAL DISPARITIES ARE PART OF AN ONGOING NARRATIVE.

- **Carolus Linnaeus** was an eighteenth-century Swedish naturalist who defined four types of people.
- **Johann Friedrich Blumenbach** was a German scientist. He coined the term Caucasian in 1795.
- **Samuel George Morton** was an American anthropologist.
- **Samuel Cartwright** defined mental illnesses like "drapetomania"



The Scientists Who Defined Race

Carolus Linnaeus was an eighteenth-century Swedish naturalist who defined four types of people

Variety	Skin color, humor, and posture	Physical traits	Behavior	Form of government
Americanus	Red, choleric and straight	Straight, black and thick hair; [freckled] face; beardless chin	Unyielding, cheerful, free	Governed by customary right
Europaeus	White, sanguine, muscular	Plenty of yellow hair; blue eyes	Light, wise, inventor	Governed by rites
Asiaticus	Yellow, melancholic, stiff	Blackish hair, dark eyes	Stern, haughty, greedy	Governed by opinions
Africanus	Black, phlegmatic, lazy	Dark hair, with many twisting braids; silky skin; flat nose; swollen lips	Sly, sluggish, neglectful	Governed by choice [caprice]

The Scientists Who Defined Race

Johann Friedrich Blumenbach was a German scientist. He coined the term Caucasian in 1795.

The Scientists Who Defined Race

Samuel George Morton was an American anthropologist.

"We of the South should consider him as our benefactor for aiding most materially in giving to the negro his true position as an inferior race."
– Charlestown Medical Journal

Friedrich Tiedemann, an anatomist who rejected Morton's work, was largely ignored.

The Scientists Who Defined Race

Samuel Cartwright defined mental illnesses like "drapetomania". The "diseases" of Black people.

Motivating Factors to Use Science to Justify Racial Inequality

Economic

- Justifying system of enslavement
- Maintaining wealth and income gaps

Political

- Limiting people's rights (ex: voting rights and right to own property)
- Maintaining inequitable power structures and hierarchies

Social

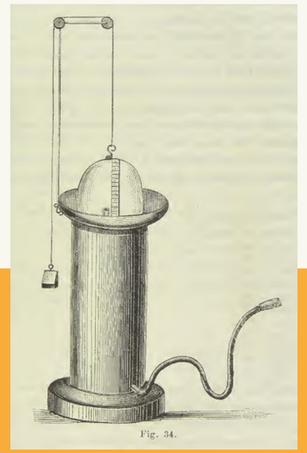
- Controlling reproduction or geographic location of people of color
- Promoting one way of behaving as "normal" or "beautiful"

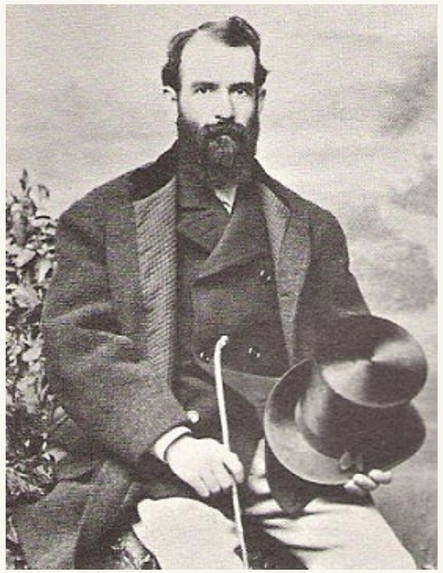
The racial taxonomy has been codified in science & medicine

AND USED TO JUSTIFY EVERYTHING FROM SEGREGATION TO EUGENICS.

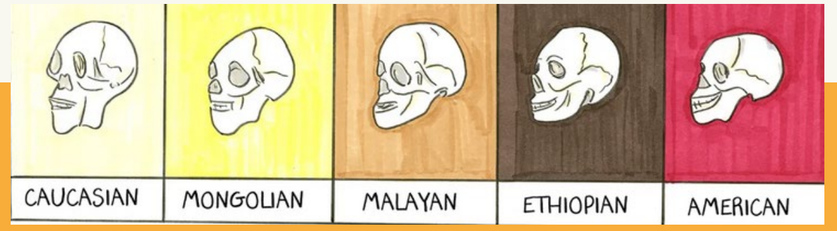
Samuel Cartwright
(1789 – 1864)
Used spirometer on slavery plantations to compare lung function of Black slaves to white slave-owners

John Hutchinson
(1811–1861)
Developed spirometer to assess fitness of military and police forces during early 19th century tuberculosis outbreak





Jay Gould (1836 – 1892)
Published the first study in 1869 that would reinforce notions of biological inferiority of Black people with data on racial comparisons of lung function with large sample sizes and anthropometric measurements of Union soldiers



Joel Bervell (@joelbervell)

Medicine Continues to Uphold Racist Notions of Biological Inferiority in Lung Function

Healthy African-Americans have spirometric values that are approximately 12 percent lower than Americans of Caucasian descent of the same age, sex and height. This difference is, in part, due to a difference in the ratio of trunk size to standing height, ie, African-Americans have longer legs for a given height. Genetics and nutritional factors may also play a role in differences by race/ ethnicity."

– UpToDate 2021

Medicine Continues to Uphold Racist Notions of Biological Inferiority in Lung Function

Race/Ethnicity, Spirometry Reference Equations, and Prediction of Incident Clinical Events: The Multi-Ethnic Study of Atherosclerosis (MESA) Lung Study

Arielle Elmaleh-Sachs [1], Pallavi Balte [1], Elizabeth C. Oelsner [1], Norrina B. Allen [2], Aaron Baugh [3], Alain G. Bertoni [4], John L. Hankinson [5], Jim Pankow [6], Wendy S. Post [7], Joseph E. Schwartz [8], Benjamin M. Smith [1], Show All...

+ Author Affiliations

https://doi.org/10.1164/rccm.202107-1612OC PubMed: 34913853

Received: July 12, 2021 Accepted: December 15, 2021

Comments

Abstract | Full Text | References | Supplements | Cited by | PDF | Related

Abstract

Section: Choose

Rationale: Normal values for FEV_1 and FVC are currently calculated using cross-sectional reference equations that include terms for race/ethnicity, an approach that may reinforce disparities and is of unclear clinical benefit.

Objectives: To determine whether race/ethnicity–based spirometry reference equations improve the prediction of incident chronic lower respiratory disease (CLRD) events and mortality compared with race/ethnicity–neutral equations.

Methods: The MESA Lung Study, a population-based, prospective cohort study of White, Black, Hispanic, and Asian adults, performed standardized spirometry from 2004 to 2006. Predicted values for spirometry were calculated using race/ethnicity–based equations following guidelines and, alternatively, race/ethnicity–neutral equations without terms for race/ethnicity. Participants were followed for events through 2019.

ATS Journals

AJRCCM | AJRCMB | AnnalsATS

American Journal of Respiratory and Critical Care

Home > American Journal of Respiratory and Critical Care Medicine > List of Issues > Volume 20

Race and Ethnicity in Pulmonary Function Test Interpretation: An Of American Thoracic Society Statement

Nirav R. Bhakta , Christian Bime , David A. Kaminsky , Meredith C. McCormack , Neeta Thakur , Sanja Stanojevic , Aaron D. Baugh , Lundy Braun , Stephanie Lovinsky-Desir , Rosemary Adamson , Jonathan Witonsky , Show All...

https://doi.org/10.1164/rccm.202302-0310ST PubMed: 36973004

Comments

Abstract | Full Text | References | Supplements | Cited by | PDF | Related

Abstract

Section: Choose

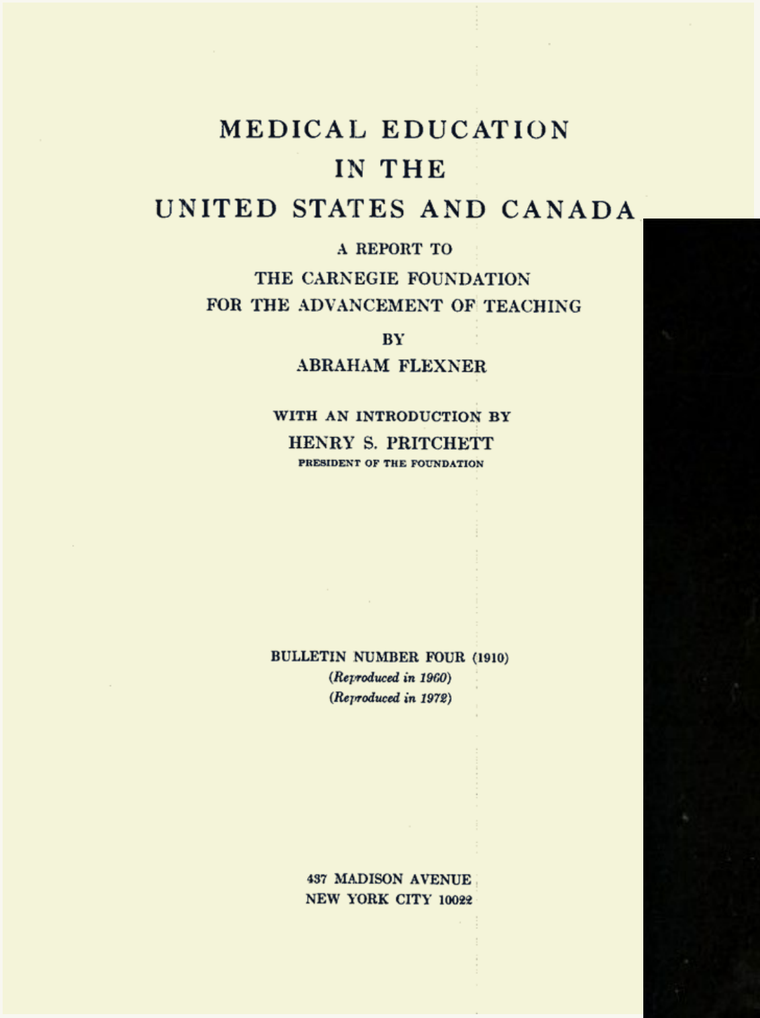
Current American Thoracic Society (ATS) standards promote the use of race and ethnicity-specific reference equations for pulmonary function test (PFT) interpretation. There is rising concern that the use of race and ethnicity in PFT interpretation contributes to a false view of fixed differences between races and may mask the effects of differential exposures. This use of race and ethnicity may contribute to health disparities by norming differences in pulmonary function. In the United States and globally, race serves as a social construct that is based on appearance and reflects social values, structures, and practices. Classification of people into racial and ethnic groups differs geographically and temporally. These considerations challenge the notion that racial and ethnic categories have biological meaning and question the use of race in PFT interpretation. The ATS convened a diverse group of clinicians and investigators for a workshop in 2021 to evaluate the use of race and ethnicity in PFT interpretation. Review of evidence published since then that challenges current practice and continued discussion

YNHHS eliminates race, ethnicity in evaluating lung-function test results

March 28, 2024

The Flexner Report (1910)

WHEN MEDICINE CAUSES DISPARITIES OUTSIDE OF BIOLOGY


MEDICAL EDUCATION
IN THE
UNITED STATES AND CANADA

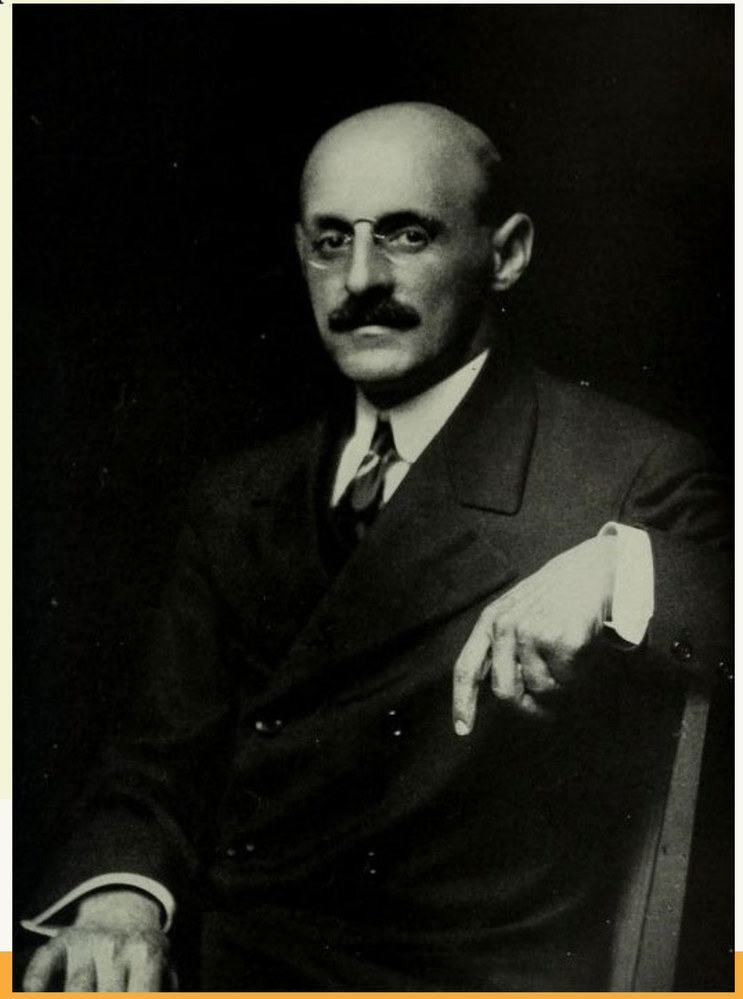
A REPORT TO
THE CARNEGIE FOUNDATION
FOR THE ADVANCEMENT OF TEACHING

BY
ABRAHAM FLEXNER

WITH AN INTRODUCTION BY
HENRY S. PRITCHETT
PRESIDENT OF THE FOUNDATION

BULLETIN NUMBER FOUR (1910)
(Reproduced in 1960)
(Reproduced in 1972)

437 MADISON AVENUE
NEW YORK CITY 10022



From practice and publications,
to the established American Medical Association,
to years of silence, prejudice & disparities,

Joel Bervell (@joelbervell)

The Flexner Report (1910)

MEDICAL INSTITUTIONS AND THEIR ROLE

MENU AMA Join Renew Enter Search Term Member Benefits Sign In

PRESS RELEASES

New AMA policy recognizes racism as a public health threat

NOV 16, 2020

CHICAGO — New policy adopted by physicians at the American Medical Association's (AMA) Special Meeting of its House of Delegates (HOD) recognizes racism as a public health threat and commits to actively work on dismantling racist policies and practices across all of health care.

In June 2020, the AMA Board of Trustees acknowledged the health consequences of violent police interactions and denounced racism as an urgent threat to public health, pledging action to confront systemic racism, racial injustice and police brutality.

The new policy approved by the AMA, representing physicians and medical students from every state and medical specialty, opposes all forms of racism as a threat to public health and calls on AMA to take prescribed steps to combat racism, including: (1) acknowledging the harm caused by racism and unconscious bias within medical research and health care; (2) identifying tactics to counter racism and mitigate its health effects; (3) encouraging medical education curricula to promote a greater understanding of the topic; (4) supporting external policy development and funding for researching racism's health risks and damages; and (5) working to prevent influences of racism and bias in health technology innovation.

Group Apologizes for Its Racial Bias

By The Associated Press

July 11, 2008

CHICAGO (AP) – The American Medical Association formally apologized on Thursday for more than a century of policies that excluded blacks from the group, long considered to be the voice of American doctors.

It was not until the 1960s that association delegates took a strong stance against policies dating to the 1800s that barred blacks from some state and local medical societies.

From practice and publications,
to the established American Medical Association,
to years of silence, prejudice & disparities,
to finally an official apology and
recognizing racism as a public health threat

JAMA Network

JAMA Network Open

JAMA Network Open

Enter Search Term

Original Investigation | Equity, Diversity, and Inclusion

April 14, 2023

Black Representation in the Primary Care Physician Workforce and Its Association With Population Life Expectancy and Mortality Rates in the US

John E. Snyder, MD, MS, MPH[1]; Rachel D. Upton, PhD[1]; Thomas C. Hassett, PhD[1]; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2023;6(4):e236687. doi:10.1001/jamanetworkopen.2023.6687

Editorial Comment

Key Points

Question Is Black representation in the US primary care physician (PCP) workforce associated with population health outcomes?

Findings In this cohort study of survival outcomes for 1618 US counties, Black PCPs operated in less than half of all counties during each of 3 time points assessed (2009, 2014, and 2019). On average, every 10-percent increase in county-level Black PCP representation was associated with 31-day higher age-standardized life expectancy among Black individuals. Higher Black PCP representation levels were also associated with lower all-cause mortality rates among Black individuals and with reduced mortality rate disparities between Black and White individuals.

Meaning These findings suggest that greater representation of Black PCPs in the PCP workforce is associated with improved survival-related outcomes for Black individuals.

A study of county-health data led by the Health Resources and Services Administration concluded that on average, every 10% increase in the representation of Black primary care physicians was associated with 30.6 days of greater life expectancy among Black people in that county.

The Story of Henrietta Lacks

THE DOUBLE-EDGED HELIX

In the delicate realm of biomedical research, those vigorous cervical cells from Baltimore are creating confusion and, possibly, disaster.

BY MICHAEL ROGERS

On a mild, rainy Thursday, early in February of 1951, an energetic young black woman, just 31, appeared for examination at the outpatient gynecologic clinic of Baltimore's Johns Hopkins Hospital—a massive, copper-spired castle of brick, ten minutes' walk east of downtown. That same day, 21 German war criminals, sentenced to die on the gallows, were spared in the most sweeping American clemency move since the cessation of hostilities.

At just about the same time the Germans received their clemency, the young woman received her death sentence, phrased in the precise language of the pathology lab: a tiny purplish lesion on her cervix, less than an inch in diameter, was cancer.

Her malignancy diagnosed, the patient would spend the remaining eight months of her life shuttling in and out of Johns Hopkins for treatment, to die there, finally, during the long humid days of late summer, leaving behind a soft-spoken husband, five children, a handful of photographs—and a tiny piece of her own flesh that by now, a quarter-century later, thrives and conquers in laboratories around the world.

The first time I heard about Helen Lane was the spring of 1974 in the men's room of a San Francisco medical school library, where an odd, felt-pen scrawl over the urinal read "Helen Lane Lives!"

The observation was meaningless to me then, and I likely would have forgotten it altogether—except less than two months later I ran across Helen Lane again. This time it was in the prestigious pages of *Science*. Helen Lane was the topic of a brief, highly technical paper that immediately sent tremors through the whole structure of international medical research.

According to the paper, the oldest and most dependable line of human cells, dubbed HeLa, had suddenly been found to be not only old and dependable, but positively aggressive. These tiny human cells had surreptitiously spread from their own glass containers to infiltrate and subvert whole sets of other cell lines—altogether unbeknownst to the countless medical researchers who based their work on them.

HeLa, according to *Science*, is cell culture shorthand for Helen Lane, and Helen Lane is a big name in that arcane pursuit. Human tissue culture is essentially the art of convincing a glass-bound set of cells that it is in fact still safely ensconced within some warm body and thereby prompting its continued reproduction. That's not an easy trick, but over the past 20 years, tissue culture has become a critical tool in medical research, allowing the scientist to observe all sorts of cellular processes—from virus infections to nutrition—without actually having to fool around with a whole live human being. And it started, really, with Helen Lane—a Baltimore woman now long dead, whose cancerous cervical cells performed so spectacularly in laboratory glassware that they became, almost overnight, one of the hottest items in experimental biomedicine.

Now, a quarter of a century "on," HeLa also looks like a major problem. For, it develops, even a single HeLa cell transferred on a glass pipette by a careless technician can overgrow an entire precisely labeled colony of different cells and settle in, right at home. At that point, of course, that precise label becomes meaningless and thus, by now, some number of researchers who had thought all along that they were experimenting with kidney cells from Los Angeles or breast tumors from Vladivostok were in fact all working with identical versions of those vigorous cervical cells from Baltimore.

In the delicate realms of biomedical research that's not exactly a minor error. It is closer, all in all, to disaster.

Just how disastrous, the *Science* paper wouldn't even hint. How, I wondered, does this tissue culture business work? How did this HeLa cell become a monster amidst the Pyrex? What are the implications for research—and most of all, who was this Helen Lane?

That wet Baltimore February day when the young black woman first appeared at the Johns Hopkins clinic, a physician/researcher named George Gey and his wife, Margaret, in a small laboratory in the same building, were rapidly approaching the culmination of a quarter-century's work in the techniques of growing human cells in glass. Gey—who died in 1970—will likely be recognized someday as a significant figure in the medical history of the early 20th century. "Biology and medicine," said one journal, a few months after his death, "are greatly indebted to George Gey, whose skill with the tissue culture technique made so much possible."

Back in 1951, however, Gey was less lionized; he blew his own glassware, employed his wife and worked long hours to support his laboratory. His research had little funding—during most of Gey's career the great war on cancer, which would put living human cells at a premium, was still well in the future.

In 1933—after eight years of shoestring research—Gey had invented the "roller tube"—a device for cell culture which, by means of slow rotation, offers the developing cells more nutrition than was possible in the traditional hollow-ground depression of a glass microscope slide. While human cells had been cultured before Gey's roller tube, it was a major step forward in simplifying what had previously been a spectacularly delicate, erratic operation.

Gey's wife, Margaret, still has the first roller tube. "He blew the glass for it himself," she says, "put the cells in and rolled it in an incubator overnight. And that was the breakthrough. Pretty soon bacteriologists were using it, and then . . . Oh my!"

But even the roller tube didn't mark smooth sailing for the Geys. "We were lucky," says Margaret Gey, "during the Depression to have $5000 a year to work with. We had to do everything from scratch. I painted our lab myself. These days people waste so much money."

Almost 20 years after the first roller tube, the young Baltimore black woman walked into Johns Hopkins and eight days after that, the resident gynecologist passed onto the Geys a tiny bit of her ultimately fatal lesion—rescued, as it were, just before the first round of her radium treatments. Gey grew that tissue in his roller tube and after several weeks of mounting excitement, he realized that this time he had cultured something very special. Historical, even. "HeLa," acted one journal, "with a generation time of about 24 hours, if allowed to grow uninhibited under optimum culture conditions, would have taken over the world by this time."

HeLa's contribution to modern medicine began immediately. The day before the young woman first visited the Baltimore clinic, 10,000 mothers marched against polio in New York City; three years later, the HeLa strain would take those mothers off the street permanently. Polio is caused by a virus and viruses require cells in which to grow. These indefatigable, indefinable HeLa cells proved to be ideal hosts for polio virus—a pivotal development in the creation of a successful vaccine. And that was only the beginning. Within a few years, HeLa was in laboratories around the world. Why, one wonders, did the Geys keep at their tissue culturing for all those years when no one was paying any attention?

"Well," says Margaret Gey, "that's what everybody asked us. Why do you do it? It won't get anyplace. But I believed in George and George kept saying that there's a *field* in this—he could feel it coming!"

Dr. Gey was right. Ask, for example, Walter Nelson-Rees, the student California cell geneticist whose terse *Science* paper, coauthored with colleagues Robert Flandermeyer and Paula Hawthorne, produced the first hard data that triggered the HeLa controversy. Nelson-Rees's sole business is, in fact, the maintenance and distribution of life in glass.

The business is, however, still sufficiently new that some mysteries remain. "I don't think," says Nelson-Rees, "that anyone really knows why one cell grows and another doesn't."

HeLa—while it is still human, reflecting the genetic makeup of its donor—is also cancerous, as are many other popular cell lines in the tissue culture business. Might this explain HeLa's laboratory longevity?

Nelson-Rees considers the possibility for a moment. "It's really not that easy," he shrugs finally, "even to grow tumor cells."

Nelson-Rees, almost certainly, should know: in a small laboratory tucked away on Navy property just south of Berkeley, he runs a thorough reference library of human and other vertebrate cell lines for the National Cancer Institute.

Everyone on Nelson-Rees's mailing list receives, annually, a thick computer-generated catalog that may well be one of the more extensive mail-order services on the planet. The catalog describes, for example, the conditions surrounding the early demise of a 16-year-old Los Angeles male, and then offers, by number, a variety of cultured samples of those deceased teenaged tissues: lung, liver, heart or kidney.

- At the young age of 31, Ms. Lacks died of cervical cancer.
- Doctors removed some of her tumor cells and sent them to Johns Hopkins' researchers (without consent)
- Her cells were found to rapidly multiplied, a breakthrough no human cell had achieved before.
- Doctors created a patent on the HeLa cell line, but hid Henrietta's true identity under a fake name Helen Lane.
- In the 70 years since her death, her cells have been...
  - Bought, sold, packaged, and shipped by the trillions to laboratories.
  - Her cells have been in 74,000 studies and used to win Nobel Peace Prizes.
  - HeLa cells were sent into space to examine conditions of spaceflight.
  - They've been used to study herpes, AIDS, hemophilia, Parkinson's disease, so much more.

Joel Bervell (@joelbervell)

What does the historic settlement won by Henrietta Lacks's family mean for others?

A legal expert says Thermo Fisher agreement could help some patients whose tissues were commercialized win redress, but they still face obstacles

7 AUG 2023 · 11:45 AM ET · BY MEREDITH WADMAN

Tuskegee Syphilis Study

The New York Times

Syphilis Victims in U.S. Study Went Untreated for 40 Years

By JEAN HELLER
The Associated Press

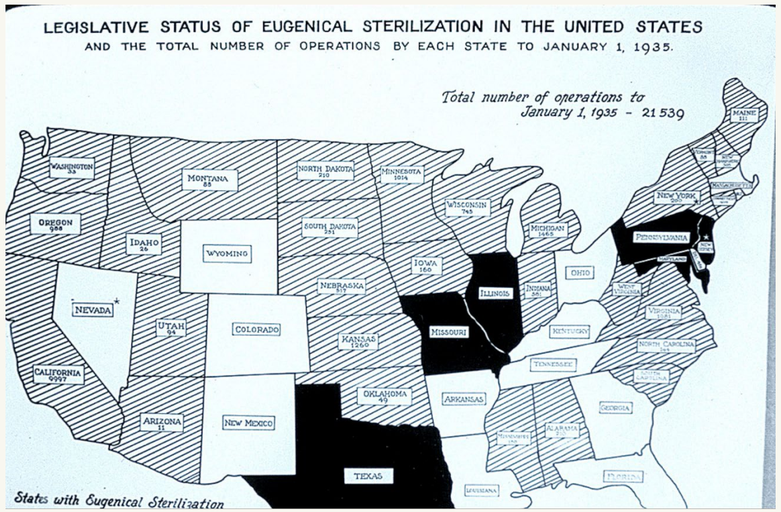
WASHINGTON, July 25—For 40 years the United States Public Health Service has conducted a study in which human beings with syphilis, who were

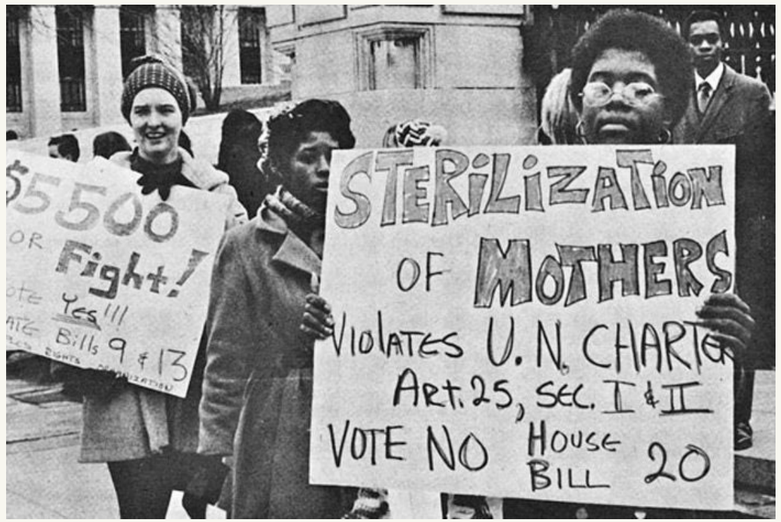
have serious doubts about the morality of the study, also say that it is too late to treat the syphilis in any surviving participants.

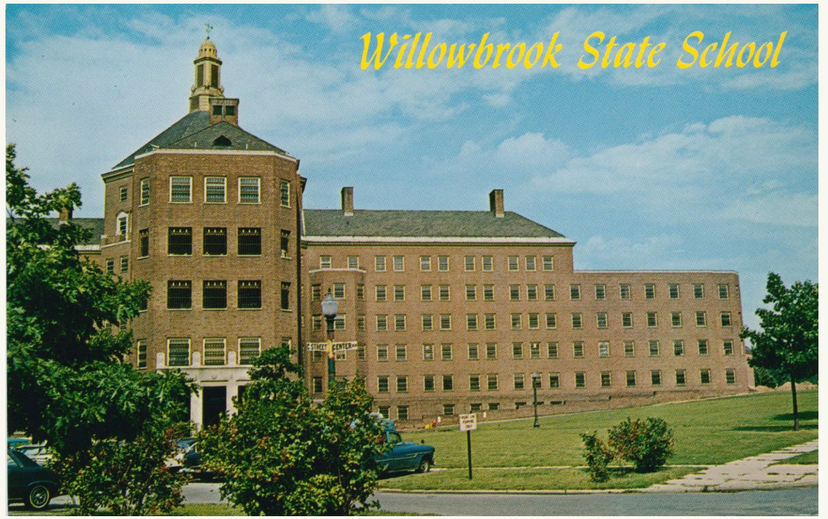
- In the late 1920s Syphilis had no effective treatment.
- In 1932, the U.S.Public Health Service began an investigation into the natural history of this dread disease.
- Location chosen for the study was Tuskegee in rural Macon County, Alabama, a place that had the highest syphilis prevalence in the country. The populace there was largely of African-American descent.
- Thus started the longest observational study in medical history: “The Tuskegee Study of Untreated Syphilis in the Negro Male (1932 – 1972).”
- Study was ONLY conducted in black men and none of them were told they were part of the study or that they had syphilis

Other Examples of Medical Mistrust

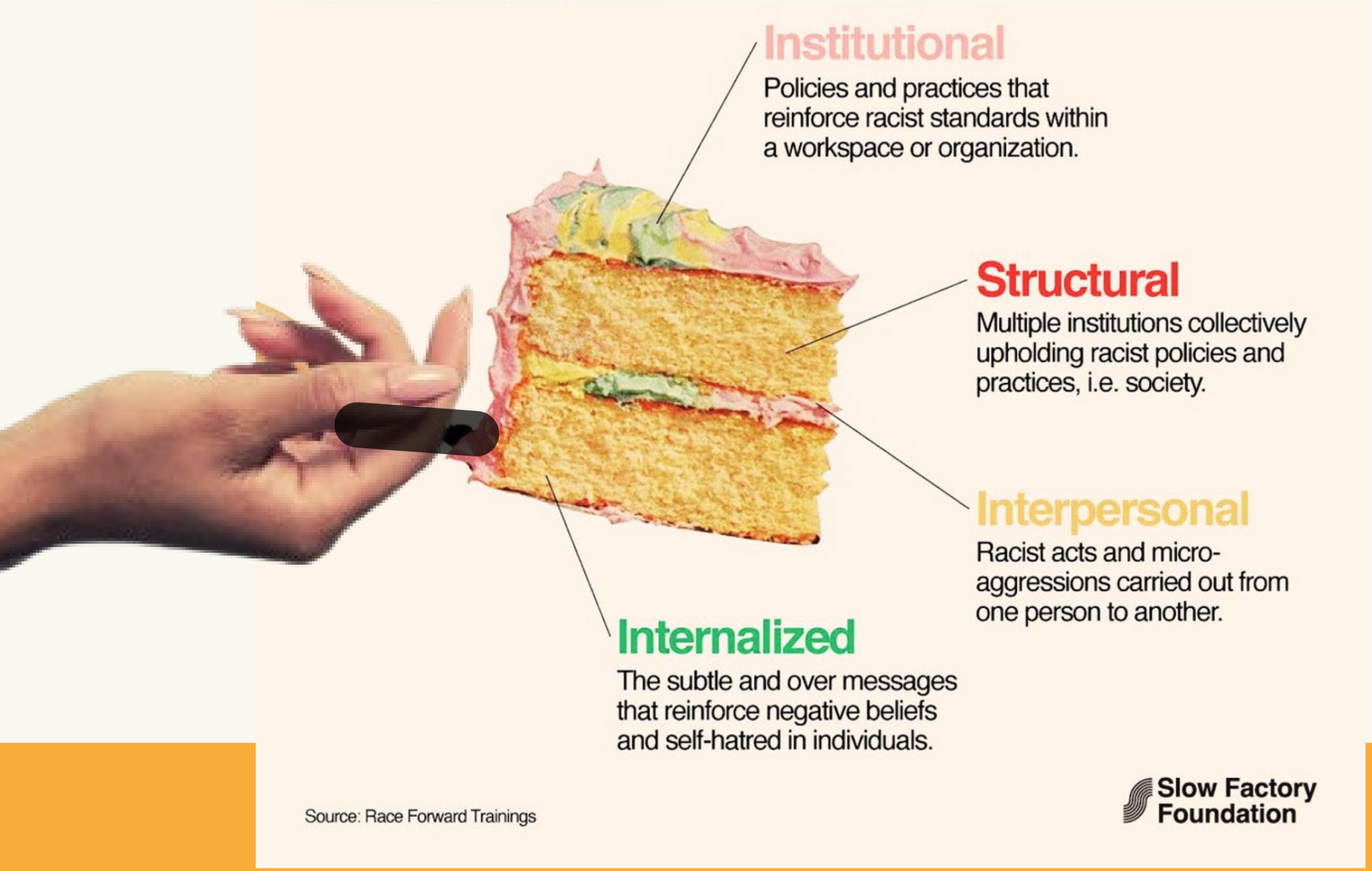
- Mississippi Appendectomies
- Willowbrook State School
- J. Marion Sims & the Mothers of Gynecology
- X-ray technicians taught to use higher doses of radiation on Black patients
- Buck v. Bell







The Four Dimensions of Racism



RACE is a socially constructed classification which "assigns human worth and social status using 'white' as the model of humanity for the purpose of establishing and maintaining privilege and power."

KEITH LAWRENCE AND TERRY KELEHER, 2004

RACISM is any action, practice, law, speech or incident which has the effect (whether intentional or not) of undermining anyone's human rights, based on race or their actual or perceived ethnic or national origin or background, where that background is that of a marginalized or historically subordinated group.

IRISH NETWORK AGAINST RACISM (INAR)

SYSTEMIC RACISM is a form of racism embedded as normal practice within society or an organization. It can lead to discrimination in criminal justice, employment, housing, politics, education, and healthcare among other issues.

What does systemic racism look like in healthcare & medicine?

MEDICAL EDUCATION

Semantics:
Using imprecise and non biologic labels that inaccurately conflate race and ancestry

Prevalence without Context:
Presenting racial/ ethnic differences in disease burden without contextualization

Race-based Diagnostic Bias:
Presentation of links between racial groups and particular diseases

Pathologizing Race:
The tendency to link minorities with increased disease burdens

RACE-BASED MEDICINE

Calculations that use race impact...

Kidney Functioning
Heart Failure Treatment
Vaginal Birth After Cesarean Likelihood
Liver Cancer Screening
Pulmonary Function Tests
Fracture Risk Assessment
Osteoporosis Risk Score
Breast Cancer Surveillance
Rectal Cancer Survival Tool
Urinary Tract Infection Calculator
STONE Score
Organ Procurement/ Transplant

MEDICAL TECHNOLOGY

Pulse Oximeters:
Black patients had nearly three times the frequency of occult hypoxemia that was not detected by pulse oximetry as White patients.

Google AI Health: Images put into the app for AI lacked Fitzpatrick V/VI

AI & Population Health:

Dermatology:
Search engine results lack diverse images of skin conditions.

Joel Bervell (@joelbervell)

What does systemic racism look like in healthcare & medicine?

MEDICAL EDUCATION

Semantics:
Using imprecise and non biologic labels that inaccurately conflate race and ancestry

Prevalence without Context:
Presenting racial/ ethnic differences in disease burden without contextualization

Race-based Diagnostic Bias:
Presentation of links between racial groups and particular diseases

Pathologizing Race:
The tendency to link minorities with increased disease burdens

RACE-BASED MEDICINE

Calculations that use race impact…

Kidney Functioning
Heart Failure Treatment
Vaginal Birth After Cesarean Likelihood
Liver Cancer Screening
Pulmonary Function Tests
Fracture Risk Assessment
Osteoporosis Risk Score
Breast Cancer Surveillance
Rectal Cancer Survival Tool
Urinary Tract Infection Calculator
STONE Score
Organ Procurement/ Transplant

MEDICAL TECHNOLOGY

Pulse Oximeters:
Black patients had nearly three times the frequency of occult hypoxemia that was not detected by pulse oximetry as White patients.

Google AI Health: Images put into the app for AI lacked Fitzpatrick V/VI

AI & Population Health:

Dermatology:
Search engine results lack diverse images of skin conditions.

MEDICAL EDUCATION

SEMANTICS

Widespread use of "Caucasian," "Black," or "African American," and "Asian" as labels to denote biologic differences between patients.
Ex. Describing a Nigerian patient as "African American" in a clinical vignette

PREVALENCE WITHOUT CONTEXT

Teaching students that "Black" patients have higher rates of asthma than "White" patients, withuot reference to the effects on asthma prevalence of residential segregation and unequal access to high-quality housing and health care.

RACE-BASED DIAGNOSIS BIAS

Priming students to view sickle cell disease as affecting only Black people, rather than as common in populations at risk for malaria.
Conversely, thinking that cystic fibrosis only occurs in caucasian populationos

RACE-BASED CLINICAL GUIDELINES

Teaching students that the first line treatment for all anti-hypertensive drugs in Black patients is different than in White patients, without any exposure to the literature that questions these practices and misleading initerpretations.

https://ldi.upenn.edu/healthpolicysense/how-medical-schools-perpetuate-physician-bias

Joel Bervell (@joelbervell)

Race, Ethnicity, and Immigration Status in a Medical Licensing Educational Resource: a Systematic, Mixed-Methods Analysis

Original Research | Open access | Published: 13 May 2021

Volume 37, pages 1045–1051, (2022) Cite this article

Results

References to Black race occurred most frequently, followed by Asian, White, and Latinx groups. Mentions of race/ethnicity varied significantly by location in the question: Asian race had 6.40 times greater odds of occurring in the answer explanation only (95% CI 1.19–34.49; $p < 0.031$) and White race had 9.88 times greater odds of occurring only in the question stem (95% CI 2.56–38.08; $p < 0.001$). Qualitative analyses suggest frequent associations between disease conditions and racial, ethnic, and immigration categories, which often carry implicit or explicit biological and genetic explanations.

RACE-BASED CLINICAL GUIDELINES

- National guidelines recommend different pharmacologic management of hypertension without comorbidities for Black/African Americans compared with non-BAA.
- Linked retrospective observational cohort using 2 years of electronic health records data, comprising of patients aged 18 to 85 with HTN on 1- or 2-drug regimens, including angiotensin-converting enzyme inhibitors (ACE), angiotensin receptor blockers (ARB), thiazide diuretics, or calcium channel blockers (CCB).
- Providers seem to be following race-based guidelines for HTN, yet HTN control for BAA remains worse than non-BAA. An individualized approach to HTN therapy for all patients may be more important than race-based guidelines.
- Study showed that while primary care providers often seem to follow race-based prescribing recommendations for HTN, disparities in HTN control for BAA patients relative to other populations persist.

RESEARCH ARTICLE

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

Kelly M. Hoffman, Sophie Trawalter, Jordan R. Axt, and M. Norman Oliver

PNAS April 19, 2016 113 (16) 4296-4301; first published April 4, 2016; https://doi.org/10.1073/pnas.1516047113

Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved March 1, 2016 (received for review August 18, 2015)

November 2015

Racial Disparities in Pain Management of Children With Appendicitis in Emergency Departments

Monika K. Goyal, MD, MSCE[1,2,3]; Nathan Kuppermann, MD, MPH[4,5]; Sean D. Cleary, PhD, MPH[6]; et al

» Author Affiliations | Article Information

JAMA Pediatr. 2015;169(11):996-1002. doi:10.1001/jamapediatrics.2015.1915

Racial and ethnic disparities in the management of acute pain in US emergency departments: Meta-analysis and systematic review

June 2019 · American Journal of Emergency Medicine 37(9)

DOI: 10.1016/j.ajem.2019.06.014

JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY
© 2017 BY THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION
PUBLISHED BY ELSEVIER

VOL. 70, NO. 2, 2017
ISSN 0735-1097/$36.00
http://dx.doi.org/10.1016/j.jacc.2017.05.024

ORIGINAL INVESTIGATIONS

Knowledge, Attitudes, and Beliefs Regarding Cardiovascular Disease in Women

The Women's Heart Alliance

C. Noel Bairey Merz, MD,[a] Holly Andersen, MD,[b] Emily Sprague, MA,[c] Adam Burns, MPP,[c] Mark Keida, PHD,[c] Mary Norine Walsh, MD,[d] Phyllis Greenberger, MSW,[e] Susan Campbell, MPH,[f] Irene Pollin, MSW, PHD(HON),[g] Cassandra McCullough, MBA,[h] Nancy Brown, BA,[i] Marjorie Jenkins, MD,[j] Rita Redberg, MD,[k] Paula Johnson, MD,[l] British Robinson, MA, JD(HON)[m]

Gender Disparity in Analgesic Treatment of Emergency Department Patients with Acute Abdominal Pain

Esther H. Chen MD, Frances S. Shofer PhD, Anthony J. Dean MD, Judd E. Hollander MD, William G. Baxt MD, Jennifer L. Robey RN, Keara L. Sease MaEd, Angela M. Mills MD

First published: 29 March 2008 | https://doi.org/10.1111/j.1553-2712.2008.00100.x | Citations: 89

✉ Esther H. Chen, MD; e-mail: esther.chen@uphs.upenn.edu.

Presented at The Society for Academic Emergency Medicine Annual Meeting, Chicago, IL, May 16–19, 2007.

RESEARCH ARTICLE

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

Kelly M. Hoffman, Sophie Trawalter, Jordan R. Axt, and M

PNAS April 19, 2016 113 (16) 4296-4301; first published April 4, 2016; h

Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and apprc 18, 2015)

Item	Percent of white laypersons who believed it was true (n = 92)	Percent of white medical students who believed it was true (n = 222)
Blacks' nerve endings are less sensitive than whites'	22%	12%
Black people's blood coagulates more quickly than whites'	42%	24%
Whites have larger brains than blacks	13%	1%
Blacks' skin is thicker than whites'	63%	58%
Blacks have stronger immune systems than whites	15%	19%

RESEARCH ARTICLE

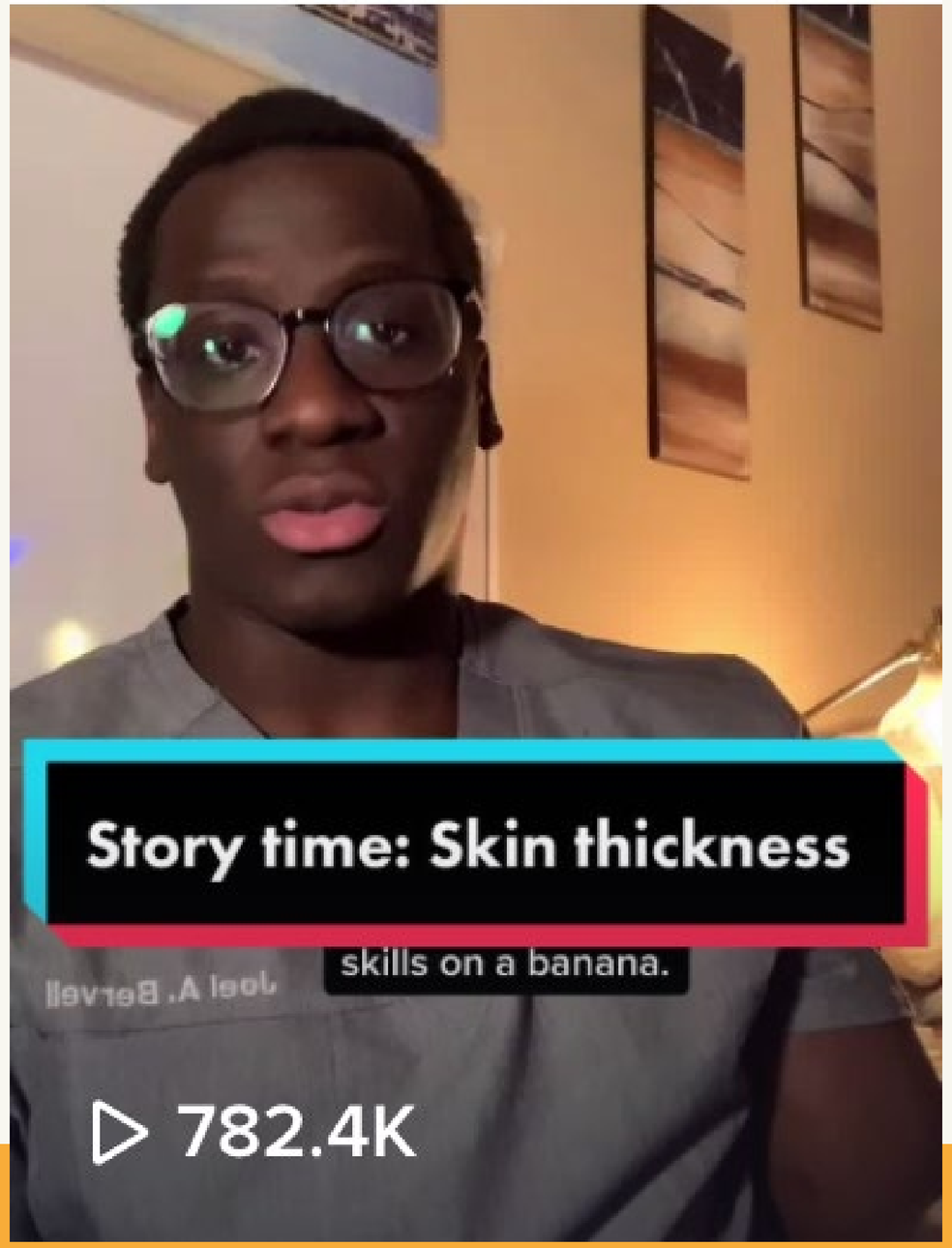
Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

Kelly M. Hoffman, Sophie Trawalter, Jordan R. Axt, and M. Norman Oliver

PNAS April 19, 2016 113 (16) 4296-4301; first published April 4, 2016; https://doi.org/10.1073/pnas.1516047113

Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved March 1, 2016 (received for review August 18, 2015)

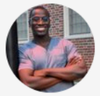
Item	Percent of white laypersons who believed it was true (*n* = 92)	Percent of white medical students who believed it was true (*n* = 222)
Blacks' nerve endings are less sensitive than whites'	22%	12%
Black people's blood coagulates more quickly than whites'	42%	24%
Whites have larger brains than blacks	13%	1%
Blacks' skin is thicker than whites'	63%	58%
Blacks have stronger immune systems than whites	15%	19%



MEDICAL EDUCATION

STORY TIME:
SKIN THICKNESS
&
BIAS IN MEDICINE
HAS BEEN VIEWED OVER 780K TIMES

Joel Bervell (@joelbervell)



Joel Bervell @joelbervell · Jan 29

Sickle Cell is a terrible disease in itself. But what makes it even more egregious is the stigma and biases that surround patients simply trying to seek help.

> **iammisswilliams** @iammisswilliams · Jan 19
>
> So my sister went to @KingstonHospNHS yesterday afternoon with a Sickle Cell crisis, wasn't admitted until this morning and was crying due to the pain, only for a Doctor to say she's crying because she's trying to score narcotics.
>
> Show this thread

10

iammisswilliams
@iammisswilliams

So my sister went to @KingstonHospNHS yesterday afternoon with a Sickle Cell crisis, wasn't admitted until this morning and was crying due to the pain, only for a Doctor to say she's crying because she's trying to score narcotics.

12:13 PM · Jan 19, 2022 · Twitter for iPhone

1,427 Retweets **235** Quote Tweets **2,763** Likes

HEALTH EQUITY

By Michael Sun, Tomasz Oliwa, Monica E. Peek, and Elizabeth L. Tung

Negative Patient Descriptors: Documenting Racial Bias In The Electronic Health Record

DOI: 10.1377/hlthaff.2021.01423
HEALTH AFFAIRS 41,
NO. 2 (2022): –

ABSTRACT Little is known about how racism and bias may be communicated in the medical record. This study used machine learning to analyze electronic health records (EHRs) from an urban academic medical center and to investigate whether providers' use of negative patient descriptors varied by patient race or ethnicity. We analyzed a sample of 40,113 history and physical notes (January 2019–October 2020) from 18,459 adult patients for sentences containing a negative descriptor (for example, resistant or noncompliant) of the patient or the patient's behavior. We used mixed effects logistic regression to determine the odds of finding at least one negative descriptor as a function of the patient's race or ethnicity, controlling for sociodemographic and health characteristics. Compared with White patients, Black patients had 2.54 times the odds of having at least one negative descriptor in the history and physical notes. Our findings raise concerns about stigmatizing language in the EHR and its potential to exacerbate racial and ethnic health care disparities.

Michael Sun (Michael.Sun@uchospitals.edu), University of Chicago, Chicago, Illinois.

Tomasz Oliwa, University of Chicago.

Monica E. Peek, University of Chicago.

Elizabeth L. Tung, University of Chicago.

Social Media as an avenue to discuss race, disparities, and racism in medicine

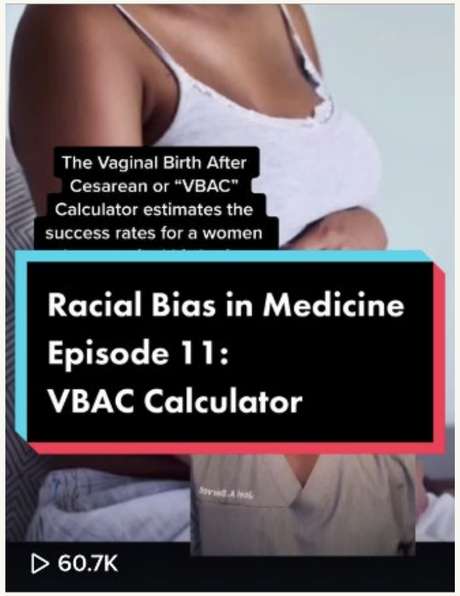
TIKTOK:
- AI-DRIVEN, IMMERSIVE FEED
- EDITING TOOLS AND VISUAL EFFECTS
- 59% OF USERS BETWEEN 16-24
- OVER 1 BILLION ACTIVE USERS

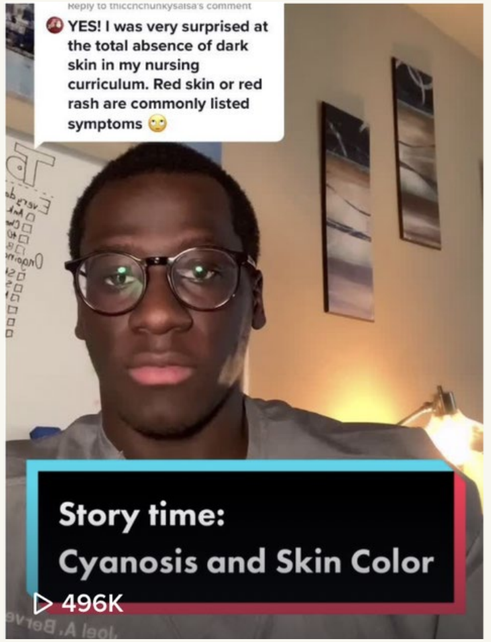
INSTAGRAM:
- 1 BILLION MONTHLY ACTIVE USERS
- 67% OF U.S. ADULTS AGES 18-29 USE INSTAGRAM
- 72% OF TEENS USE INSTAGRAM
- INSTAGRAM VIDEOS GET 2 TIMES AS ENGAGEMENT AS PHOTOS

The Impact of Educating on Social Media

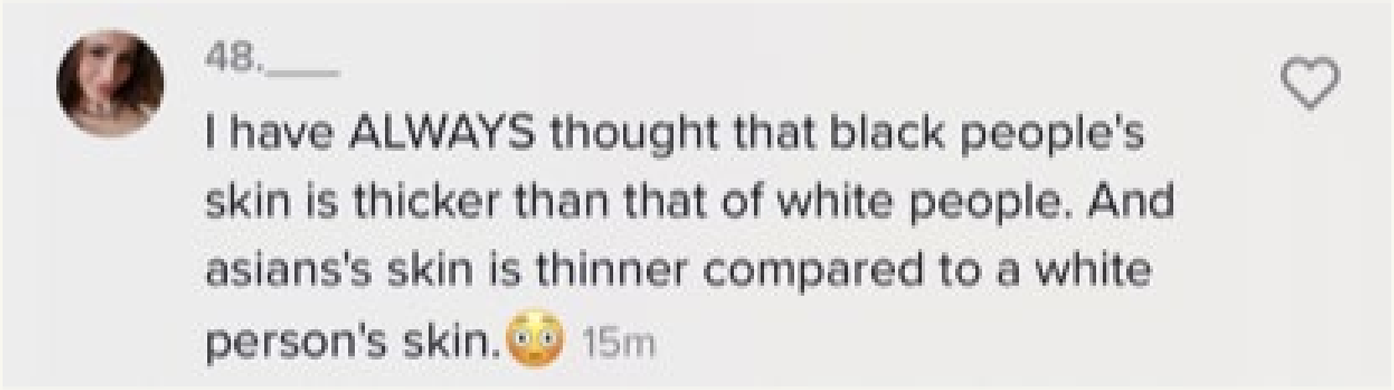
IMPRESSIONS:

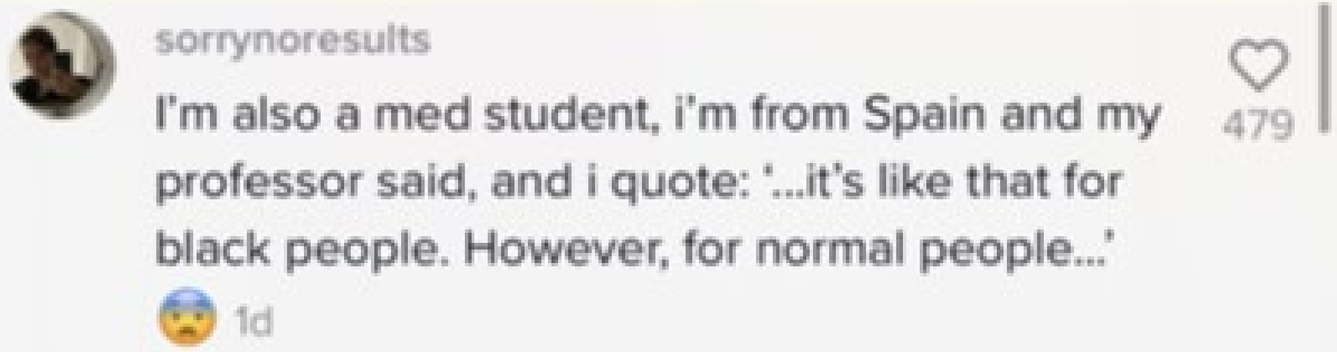
- 600+ Videos
- 1.2M+ Followers
- 30 Million Likes
- 300 Million+ Video Impressions
- 150,000+ Comments

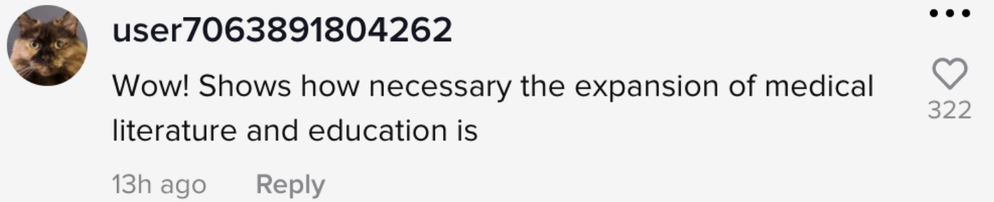


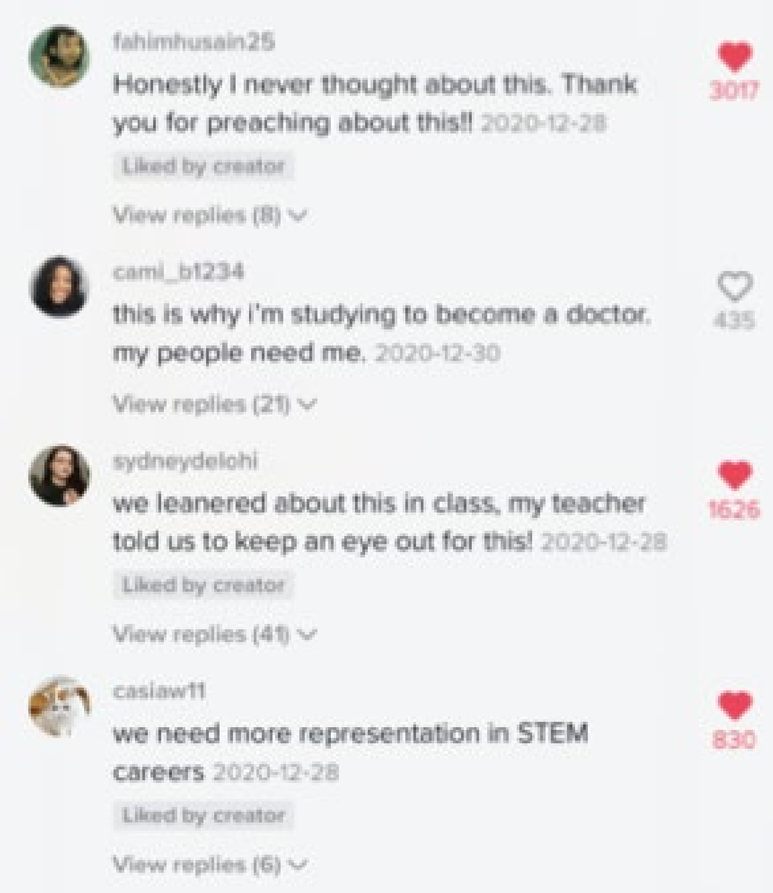


Creating Conversation









Meaningful Impact

expectopotatoe
I'm white, and during lectures on derm I asked why we weren't learning about these conditions on black skin and other races... the lecturer was silent
19
1-1 Reply

callaghansquestions
I got into a fight with a professor when he insisted black people don't feel pain as much but couldn't provide any neurological evidence.
8433
2021-2-12 Reply

sourpatchadult_
No lie, they told us in nursing school that black people express pain more dramatically. Aka they might not be in as much pain as they are expressing.
131
2021-2-21 Reply
View replies (7)

lovemyboysalways
Because of your page I've made the decision to go to medical school. I'm in my early 30s with 2 children but I'm going to try.
13
1h Reply

3rin3lisha
Your ABCDE of melanoma saved my life... I had the mole removed from the bottom of my foot earlier this year 🥰
13
23m Reply
Liked by creator

joelbervell · Creator
Wow!!! Thank you for letting me know ❤️❤️❤️so happy it was helpful
5
13m Reply

3rin3lisha ▸ joelbervell
The day you posted it... I looked the bottom of my foot and the mole I've had since I was young had grown and changed shape. I called my DM right away
8m Reply

3rin3lisha ▸ 3rin3lisha
And had it removed and tested immediately! Thank you so much for making these vids. They are so important 🙌🏽🤍
7m Reply

jasonderulo · Following
This is great 🙌🏽
761
6h Reply
Liked by creator

smilebig929
commented: I want to say thank you. You saved my life by talking about this. I have it and I'm getting treated. 5m

What does systemic racism look like in healthcare & medicine?

MEDICAL EDUCATION

Semantics:
Using imprecise and non biologic labels that inaccurately conflate race and ancestry

Prevalence without Context:
Presenting racial/ ethnic differences in disease burden without contextualization

Race-based Diagnostic Bias:
Presentation of links between racial groups and particular diseases

Pathologizing Race:
The tendency to link minorities with increased disease burdens

RACE-BASED MEDICINE

Calculations that use race impact…

Kidney Functioning
Heart Failure Treatment
Vaginal Birth After Cesarean Likelihood
Liver Cancer Screening
Pulmonary Function Tests
Fracture Risk Assessment
Osteoporosis Risk Score
Breast Cancer Surveillance
Rectal Cancer Survival Tool
Urinary Tract Infection Calculator
STONE Score
Organ Procurement/ Transplant

MEDICAL TECHNOLOGY

Pulse Oximeters:
Black patients had nearly three times the frequency of occult hypoxemia that was not detected by pulse oximetry as White patients.

Google AI Health: Images put into the app for AI lacked Fitzpatrick V/VI

AI & Population Health:

Dermatology:
Search engine results lack diverse images of skin conditions.

RACE-BASED MEDICAL EQUATIONS

GLOMERULAR FILTRATION RATE

In the GFR equation, there is a race adjustment, that increases the GFR for Black patients. Because higher GFR rates indicate better kidney functioning, the "race correction "could be overestimating the GFR55, resulting in Black patients getting less care and missing necessary treatment.

VAGINAL BIRTH AFTER CESAREAN

The VBAC calculator has two race-based correction factors, one for African American women and another for Hispanic women. These correction factors “subtract” from the overall likelihood of successful VBAC, so that women identified as African American or Hispanic are systematically assigned a lower chance of successful VBAC than white women.

NFL CONCUSSION PAYOUTS

NFL policy assumed that Black players had lower cognitive functioning compared to non-Black players. That made it more difficult for Black NFL players to receive equal compensation for their injuries because they had to show worse cognitive functioning than white players.

HEART FAILURE

Race is also considered as a factor when evaluating heart failure. Three points are added to the risk score if a patient is identified as non-black. That addition increases the estimated probability of death for non-black patients with acute heart failure.

Source:
Vyas, Darshali A., Leo G. Eisenstein, and David S. Jones. “Hidden in Plain Sight — Reconsidering the Use of Race Correction in Clinical Algorithms.” New England Journal of Medicine, June 17, 2020.

Joel Bervell (@joelbervell)

Glomerular Filtration Rate

GLOMERULAR FILTRATION RATE

In the GFR equation, there is a race adjustment, that increases the GFR for Black patients. Because higher GFR rates indicate better kidney functioning, the "race correction "could be overestimating the GFR55, resulting in Black patients getting less care and missing necessary treatment.

Source:
Vyas, Darshali A., Leo G. Eisenstein, and David S. Jones. “Hidden in Plain Sight — Reconsidering the Use of Race Correction in Clinical Algorithms.” New England Journal of Medicine, June 17, 2020.

ORIGINAL ARTICLE

New Creatinine- and Cystatin C–Based Equations to Estimate GFR without Race

Lesley A. Inker, M.D., Nwamaka D. Eneanya, M.D., M.P.H., Josef Coresh, M.D., Ph.D., Hocine Tighiouart, M.S., Dan Wang, M.S., Yingying Sang, M.S., Deidra C. Crews, M.D., Alessandro Doria, M.D., Ph.D., M.P.H., Michelle M. Estrella, M.D., M.H.S., Marc Froissart, M.D., Ph.D., Morgan E. Grams, M.D., M.H.S., Ph.D., Tom Greene, Ph.D., et al., for the Chronic Kidney Disease Epidemiology Collaboration*

September 23, 2021
DOI: 10.1056/NEJMoa2102953

38 References 3 Citing Articles

Abstract

BACKGROUND

Current equations for estimated glomerular filtration rate (eGFR) that use serum creatinine or cystatin C incorporate age, sex, and race to estimate measured GFR. However, race in eGFR equations is a social and not a biologic construct.

METHODS

We developed new eGFR equations without race using data from two development data sets: 10 studies (8254 participants, 31.5% Black) for serum creatinine and 13 studies (5352 participants, 39.7% Black) for both serum creatinine and cystatin C. In a validation data set of 12 studies (4050 participants, 14.3% Black), we compared the accuracy of new eGFR equations to measured GFR. We projected the prevalence of chronic kidney disease (CKD) and GFR stages in a sample of U.S. adults, using current and new equations.

Related Articles

EDITORIAL SEP 23, 2021
Time to Eliminate Health Care Disparities in the Estimation of Kidney Function
W.W. Williams, J.W. Hogan, and J.R. Ingelfinger

ORIGINAL ARTICLE SEP 23, 2021
Race, Genetic Ancestry, and Estimating Kidney Function in CKD
C.-y. Hsu and Others

Medical Students becoming Activists

“So how did we make this change? We made it by questioning lecturers when the MDRD was taught. We did it by not letting the issue go and continuing to push discussions in class about the use of this equation… We did it by having meetings with teaching faculty, sending articles to them like the one in JAMA, forcing discussions in small group sessions, and making use of the advocacy framework that we built via ARAC.”

– UW School of Medicine MD/MPH Student, Naomi Nkinsi via Twitter

May 29, 2020

UW Medicine to exclude race from calculation of eGFR (measure of kidney function)

CLINICAL

UW medical students initiate one of the first of its kind transition to the calculation of estimated glomerular filtration rate that is not adjusted by race.

A serum creatinine test measures the level of creatinine in your blood and provides an estimate of how well your kidneys filter (glomerular filtration rate).

When measuring kidney function, virtually every laboratory in the United States, including UW Medicine, automatically calculates an estimated glomerular filtration rate (eGFR) every time serum creatinine is measured. This test has traditionally used the Modification of Diet in Renal Disease (MDRD) equation to calculate eGFR to determine levels of creatinine in each sample.

The eGFR results are then reported with race factored as a precision variable. The usual approach is to report two values – one for Blacks and another for non-Blacks.

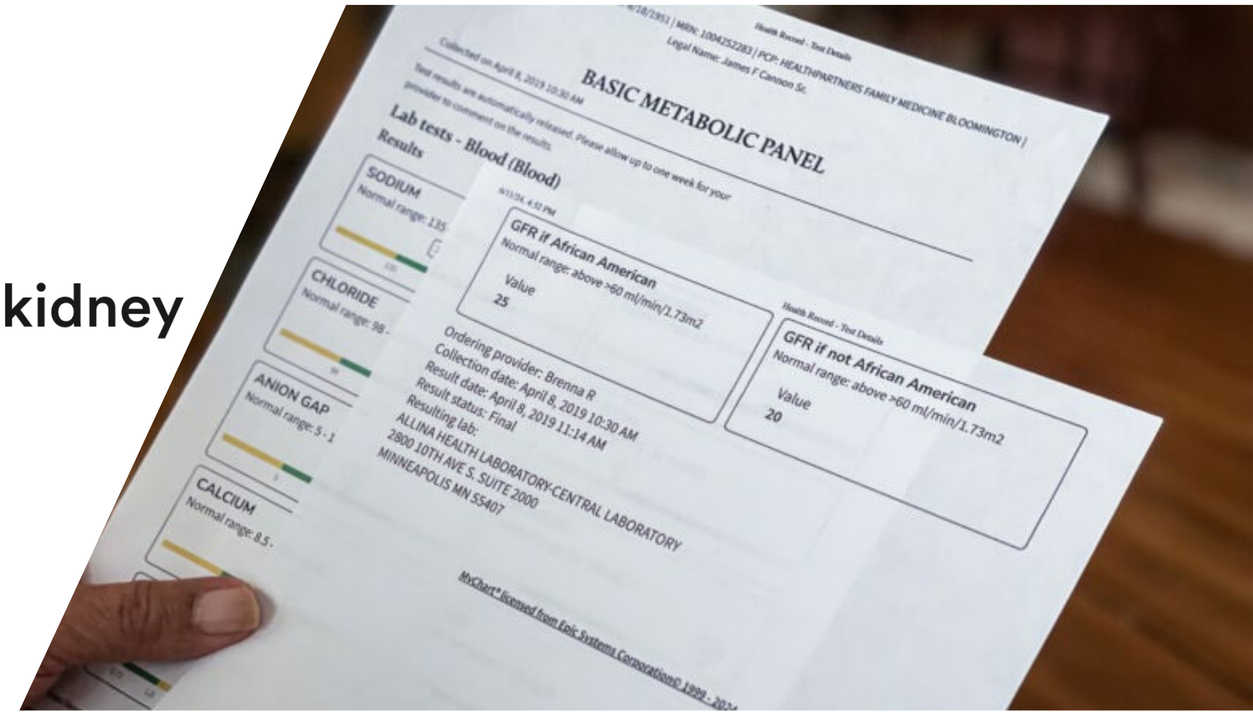
In 2018, the conversation was initiated by UW School of Medicine medical students questioning the strength of evidence underlying the reporting of eGFR by race.

> “So how did we make this change? We made it by

A STAT INVESTIGATION

[EMBEDDEDBIAS]

Inside the bruising battle to purge race from a kidney disease calculator



Organ Transplantation Network New Rules

Impact of race-neutral eGFR calculations on African American kidney transplant candidate wait time: A single center retrospective analysis

Rafael Khaim [1], Rachel Todd [1], Andrew Rosowicz [1], Ron Shapiro [1], Sander Florman [1], Leona Kim-Schluger [1], Fasika Tedla [1]

Affiliations + expand

PMID: 38380716 DOI: 10.1111/ctr.15267

Abstract

Race-inclusive estimated glomerular filtration rate (eGFR) could contribute to racial disparity in access to kidney transplantation. The Organ Procurement and Transplantation Network (OPTN) issued a policy allowing waiting time modification for candidates affected by race-inclusive eGFR calculations. Implementation of the new OPTN policy at the kidney transplant program of the Mount Sinai Hospital involved review of 921 African American candidates, of whom 240 (26%) candidates gained a median of 1 year and 10 months. The duration of time candidates gained varied from a minimum of 5 days to a maximum of 12 years and 3 months; 45.4% gained at least 2 years, and 12% gained at least 4 years of wait time. Among those who gained wait time, 20 (8.3%) candidates received deceased donor kidney transplants. Candidates who gained wait time had similar sociodemographic characteristics as those who did not, except that the median age for the former was higher by 3 years (59 vs. 56). Our early data suggest that the current policy on waiting time modification for candidates affected by race-inclusive estimation of GFR has the potential to improve racial disparity in access to kidney transplantation. However, the generalizability of our findings to other centers requires further study.

Proposed changes

- The OPTN will update its policy to require eGFR calculations not include race as a variable.
- All policies that include reference to eGFR will be updated. These include:
  - Policy 1.2: Definitions
  - Policy 3.6.B.i: Non-function of a Transplanted Kidney
  - Policy 8.4.A: Waiting Time for Candidates Registered at Age 18 Years or Older
  - Policy 8.5.G: Prioritization for Liver Recipients on the Kidney Waiting List
  - Policy 9.5.H: Requirements for Primary Hyperoxaluria MELD or PELD Score Exceptions
  - Policy 9.9.B: Liver-Kidney Candidate Eligibility for Candidates 18 Years or Older
  - Policy 13.6.A: Requirements for Match Run Eligibility for Candidates
  - Policy 13.7.G: OPTN KPD Waiting Time Reinstatement

Anticipated impact

- What it's expected to do
  - Increase GFR estimation accuracy and access to transplantation for Black kidney candidates.
  - Allow more Black kidney candidates to meet the qualifying eGFR thresholds in the appropriate timeframe.
  - Allow transplant hospitals to use the most up-to-date methods to calculate eGFR as they are developed.
- What it won't do
  - The new policy won’t tell hospitals which formula to use, as long as the formula doesn’t include a race variable.

From Digital to Real-World Impact

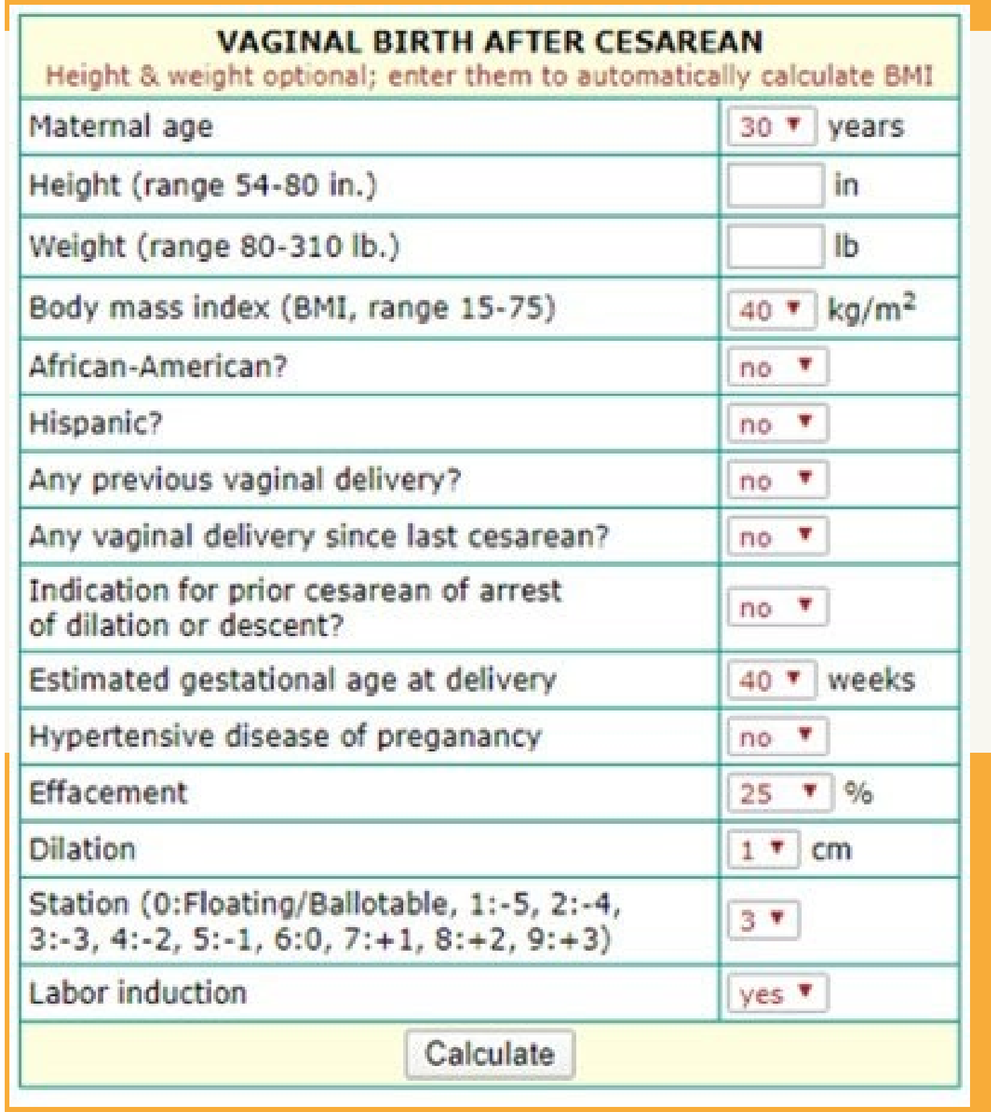
Researchers Remove Race from Childbirth Calculator in Effort to Advance Equity

Source: Health Policy Institute of Ohio

After years of work by researchers, advocates, and clinicians, a calculator that used race as a factor to determine the likelihood of having a successful vaginal birth after cesarean has been replaced by a newly validated version that is the same in almost every way — except for eliminating race and ethnicity as a risk factor (Source: "Changing the Equation: Researchers Remove Race from a Calculator for Childbirth," *Stat News,* June 3, 2021).

The previous tool takes into account a patient's age, height, weight, and history of vaginal and cesarean delivery. It also asks two yes-or-no questions: "African-American?" "Hispanic?" The answers can predict a drastically lower chance of success for patients of color. However, that racialized calculator has now been replaced by a newly validated version that does not include inputting race or ethnicity information.

The Vaginal Birth After Cesarean (VBAC) calculator is just one of several clinical algorithms that have recently been challenged over their use of race adjustment. Professionals across specialties have questioned the inclusion of race and ethnicity — which are social, not biological factors — in their decision-making tools, pointing to the risk of perpetuating existing health inequities. But because obstetricians access the VBAC calculator online, it could prove much easier than with other corrected tools to get the updated calculator quickly into use across the country.



VAGINAL BIRTH AFTER CESAREAN

Height & weight optional; enter them to automatically calculate BMI

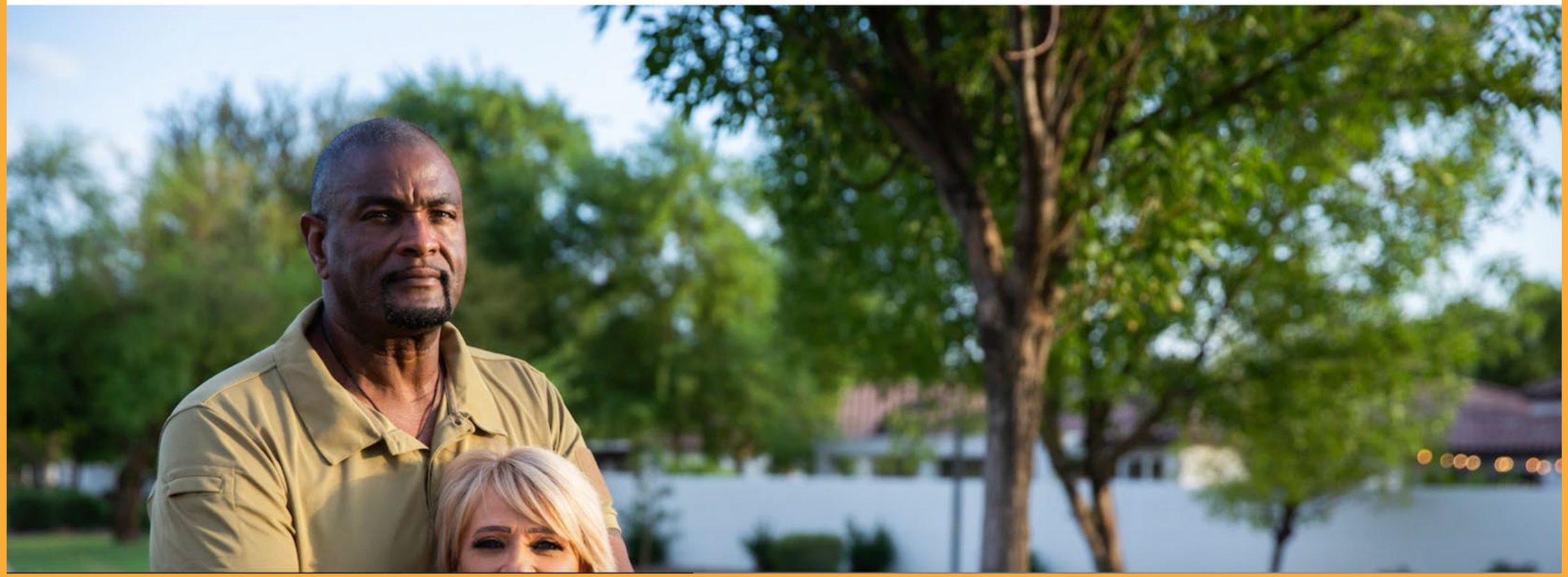
Maternal age	30 years
Height (range 54-80 in.)	in
Weight (range 80-310 lb.)	lb
Body mass index (BMI, range 15-75)	40 kg/m^2
African-American?	no
Hispanic?	no
Any previous vaginal delivery?	no
Any vaginal delivery since last cesarean?	no
Indication for prior cesarean of arrest of dilation or descent?	no
Estimated gestational age at delivery	40 weeks
Hypertensive disease of preganancy	no
Effacement	25 %
Dilation	1 cm
Station (0:Floating/Ballotable, 1:-5, 2:-4, 3:-3, 4:-2, 5:-1, 6:0, 7:+1, 8:+2, 9:+3)	3
Labor induction	yes

Calculate

NFL

How ‘race-norming’ was built into the NFL concussion settlement

The NFL and lawyers for former players blame the controversial practice on doctors. But both sides negotiated a settlement that guaranteed race would affect payouts — and defended the practice long after concerns were raised.



LaShyra "Lash" Nolen
@LashNolen

Today we learned about Lyme disease and it's classic symptom: a bullseye rash (erythema migrans) formed around the area of a tick bite.

A classmate of mine asked, "How is this diagnosed for those with darker skin?"

Our profe

11:50 AM · Oc

View Twee

7.3K Retwee

Perspective

How Medical Education Is Missing the Bull's-eye

LaShyra Nolen, B.S.

Article | Figures/Media | Metrics

5 References | 18 Comments

June 25, 2020
N Engl J Med 2020; 382:2489-2491
DOI: 10.1056/NEJMp1915891

MOVING THROUGH THE WORLD AS A BLACK WOMAN, I AM accustomed to not being represented as "the norm." Everything from the hue of the Band-Aids that cover my wounds to the heroes in the movies I watch makes me acutely aware of my deviation from what is typical and expected: I am black and female, whereas the world represented around me is often white and male. For me and for many members of minority groups in the United States, this realization does not come as an epiphany but is instead an essential fact that we must come to understand to navigate the world in which we live. It was not until I started medical school, however, that I realized the ways in which the standard representation of white and male might affect medical education — and consequently the quality of care that my peers and I will provide to our future patients.

I began to ponder this issue after taking my school's mandatory in-person CPR training course. The paramedics walked in with large bags filled with plastic mannequins and opened them to reveal that all our "patients" were white male bodies. I left the 2-hour course without any knowledge of the nuances of performing CPR on patients with breasts or the potential

Medical Students becoming Activists

hutano

TIME

SUBSCI

HEALTH • MEDICINE

Medical Schools Usually Don't Teach How Conditions Look on Different Skin Tones. Malone Mukwende Is Trying to Change That

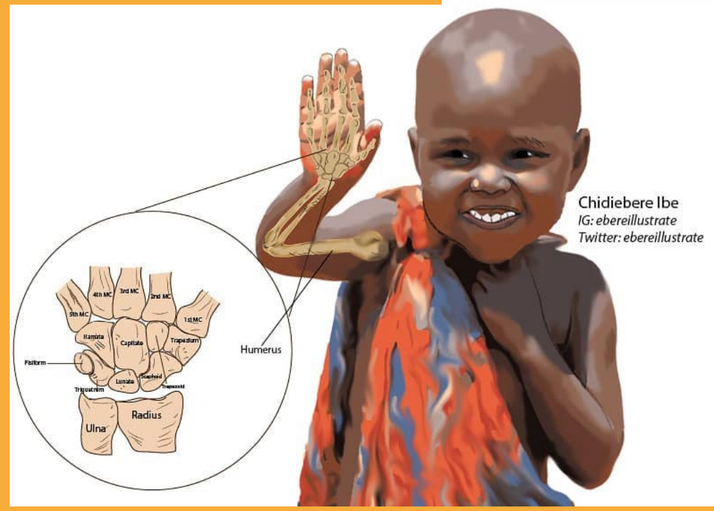
Hutano, in my native language, Shona, translates directly to 'health'. It's a health social platform, where people from all over the world can connect to form communities and really discuss these different conditions.

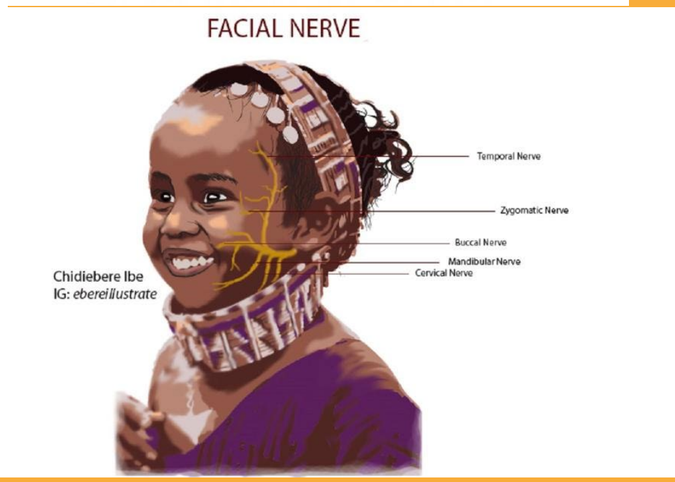
St George's University of London

Medical Students becoming Activists

Nigerian medical student and illustrator, Chidiebere Ibe, is disrupting the status quo by portraying anatomy, physiology, and pathology on Black skin

One of his illustrations, depicting a pregnant Black woman and her fetus, has received more than 97,000 likes on Instagram.





What does systemic racism look like in healthcare & medicine?

MEDICAL EDUCATION

Semantics:
Using imprecise and non biologic labels that inaccurately conflate race and ancestry

Prevalence without Context:
Presenting racial/ ethnic differences in disease burden without contextualization

Race-based Diagnostic Bias:
Presentation of links between racial groups and particular diseases

Pathologizing Race:
The tendency to link minorities with increased disease burdens

RACE-BASED MEDICINE

Calculations that use race impact…

Kidney Functioning
Heart Failure Treatment
Vaginal Birth After Cesarean Likelihood
Liver Cancer Screening
Pulmonary Function Tests
Fracture Risk Assessment
Osteoporosis Risk Score
Breast Cancer Surveillance
Rectal Cancer Survival Tool
Urinary Tract Infection Calculator
STONE Score
Organ Procurement/ Transplant

MEDICAL TECHNOLOGY

Pulse Oximeters:
Black patients had nearly three times the frequency of occult hypoxemia that was not detected by pulse oximetry as White patients.

Google AI Health: Images put into the app for AI lacked Fitzpatrick V/VI

AI & Population Health

Dermatology:
Search engine results lack diverse images of skin conditions.

Joel Bervell (@joelbervell)

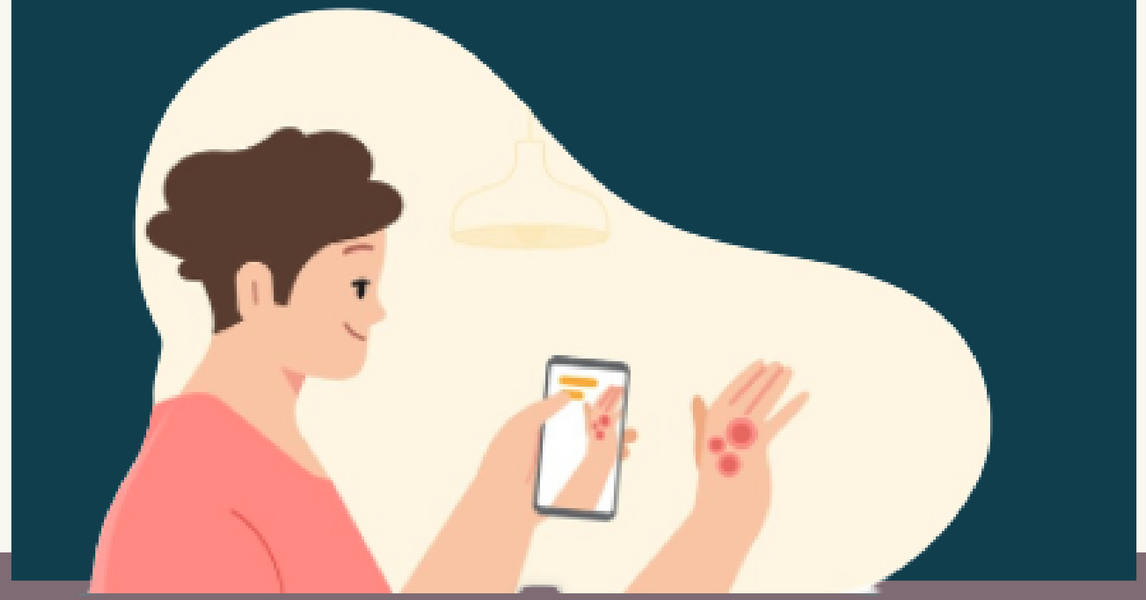
MEDICAL TECHNOLOGY

PULSE OXIMETERS

Due to differences in how skin absorbs light, Black patients are nearly three times as likely to have inaccurate, overestimated oxygen levels compared to White patients.

GOOGLE AI HEALTH

Google's AI health tool for skin conditions was developed based on training data with less than 4% dark skin types.



Joel Bervell (@joelbervell)

WHYY PBS npr

News Radio & Podcasts TV Arts Events Education

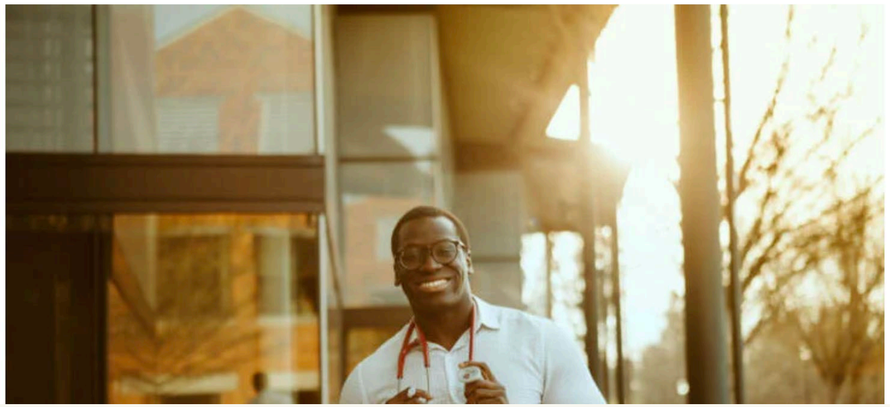
HEALTH HEALTH CARE MEDICINE PUBLIC HEALTH

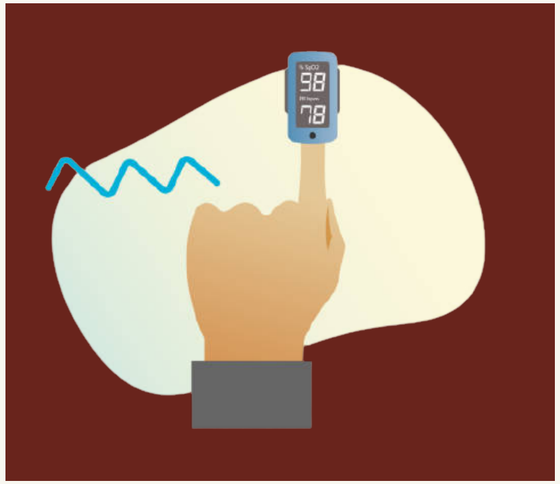
thepulse Listen on Apple Podcasts Listen on Spotify

How the pulse oximeter became infamous on TikTok

Med student Joel Bervell found an unlikely place to educate both health care providers and patients about racial biases that are affecting care.

By Joel Bervell · May 1, 2023





Joel Bervell (@joelbervell)

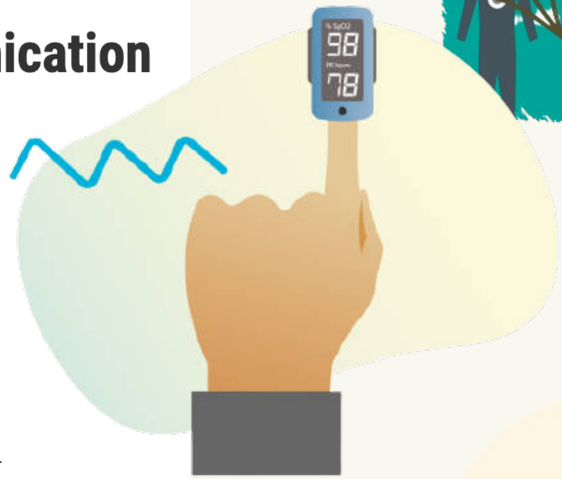
MEDICAL TECHNOLOGY: PULSE OXIMETERS

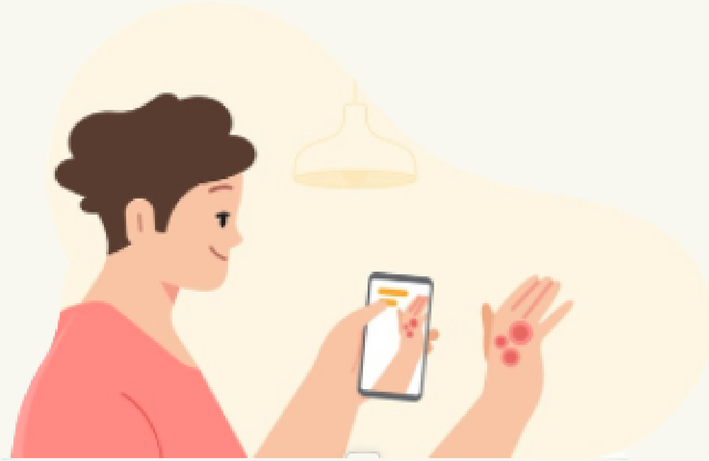
Pulse Oximeter Accuracy and Limitations: FDA Safety Communication

Share | Tweet | Linkedin | Email | Print

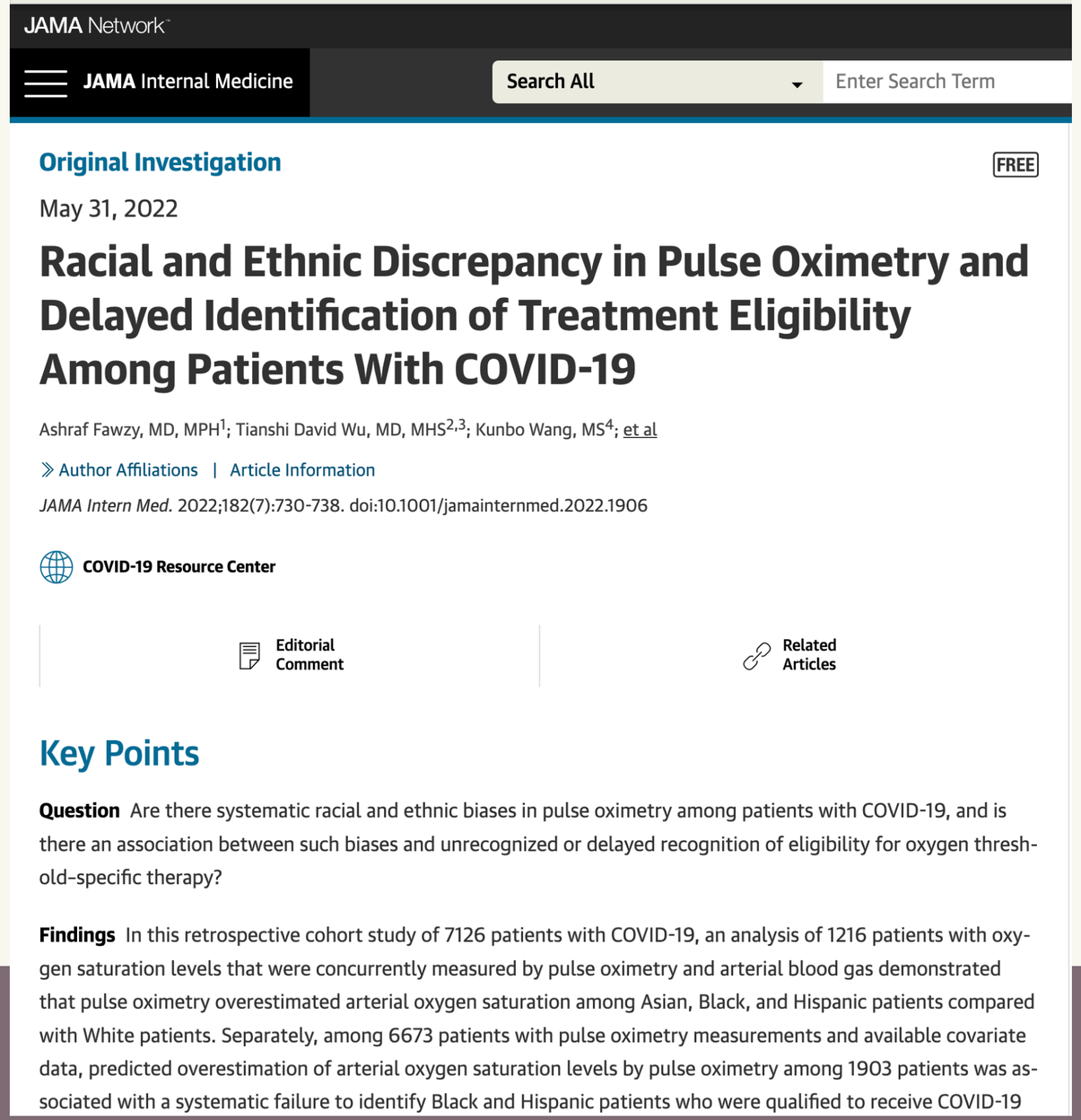
Date Issued: February 19, 2021

The Coronavirus Disease 2019 (COVID-19) pandemic has caused an increase in the use of pulse oximeters, and a recent report (Sjoding et al.) suggests that the devices may be less accurate in people with dark skin pigmentation. The U.S. Food and Drug Administration (FDA) is informing patients and health care providers that although pulse oximetry is useful for estimating blood oxygen levels, pulse oximeters have limitations and a risk of inaccuracy under certain circumstances that should be considered. Patients with conditions such as COVID-19 who monitor their condition at home should pay attention to all signs and symptoms of their condition and communicate any concerns to their health care provider.





MEDICAL TECHNOLOGY: PULSE OXIMETERS



JAMA Network

JAMA Internal Medicine

Search All | Enter Search Term

Original Investigation

FREE

May 31, 2022

Racial and Ethnic Discrepancy in Pulse Oximetry and Delayed Identification of Treatment Eligibility Among Patients With COVID-19

Ashraf Fawzy, MD, MPH[1]; Tianshi David Wu, MD, MHS[2,3]; Kunbo Wang, MS[4]; et al

» Author Affiliations | Article Information

JAMA Intern Med. 2022;182(7):730-738. doi:10.1001/jamainternmed.2022.1906

COVID-19 Resource Center

Editorial Comment

Related Articles

Key Points

Question Are there systematic racial and ethnic biases in pulse oximetry among patients with COVID-19, and is there an association between such biases and unrecognized or delayed recognition of eligibility for oxygen threshold-specific therapy?

Findings In this retrospective cohort study of 7126 patients with COVID-19, an analysis of 1216 patients with oxygen saturation levels that were concurrently measured by pulse oximetry and arterial blood gas demonstrated that pulse oximetry overestimated arterial oxygen saturation among Asian, Black, and Hispanic patients compared with White patients. Separately, among 6673 patients with pulse oximetry measurements and available covariate data, predicted overestimation of arterial oxygen saturation levels by pulse oximetry among 1903 patients was associated with a systematic failure to identify Black and Hispanic patients who were qualified to receive COVID-19

MEDICAL TECHNOLOGY: ARTIFICAL INTELLIGENCE

Science. 2019 Oct 25;366(6464):447-453. doi: 10.1126/science.aax2342.

Dissecting racial bias in an algorithm used to manage the health of populations

Ziad Obermeyer [1,2], Brian Powers [3], Christine Vogeli [4], Sendhil Mullainathan [5]

Affiliations + expand

PMID: 31649194 DOI: 10.1126/science.aax2342

Abstract

Health systems rely on commercial prediction algorithms to identify and help patients with complex health needs. We show that a widely used algorithm, typical of this industry-wide approach and affecting millions of patients, exhibits significant racial bias: At a given risk score, Black patients are considerably sicker than White patients, as evidenced by signs of uncontrolled illnesses. Remedying this disparity would increase the percentage of Black patients receiving additional help from 17.7 to 46.5%. The bias arises because the algorithm predicts health care costs rather than illness, but unequal access to care means that we spend less money caring for Black patients than for White patients. Thus, despite health care cost appearing to be an effective proxy for health by some measures of predictive accuracy, large racial biases arise. We suggest that the choice of convenient, seemingly effective proxies for ground truth can be an important source of algorithmic bias in many contexts.

Remedying the disparity would've increased the percentage of Black patients that had received additional help from 17.7 to 46.5%.

"This one algorithm that we studied on its own, the company that makes it, that by their estimates, it's being used to screen 70 million people every year in this country."
– Ziad Obermeyer

MEDICAL TECHNOLOGY: ARTIFICAL INTELLIGENCE

Dr. Ziad Obermeyer

“Most organizations didn’t even have a list of all the algorithms that were being used in that organization…

And I think that in every healthcare system, that none of them for the past years have had a chief anything officer with a mandate to look at the risks and the benefits of algorithms that are being used.”

Being A Voice for Patients:

Health Policy

Better Health Outcomes

Patient / Provider Education

Demonstrate leadership skills

Attacks on DEI

U.S. CONGRESSMAN GREGORY F. MURPHY, M.D.
REPRESENTING THE 3RD DISTRICT OF NORTH CAROLINA

ABOUT CONTACT ISSUES MEDIA SERVICES WATERS SUMMIT ISRAEL EVACUATION

Enter keywor

Home / Media / Press Releases

Murphy Introduces Bill to Ban DEI in Medicine

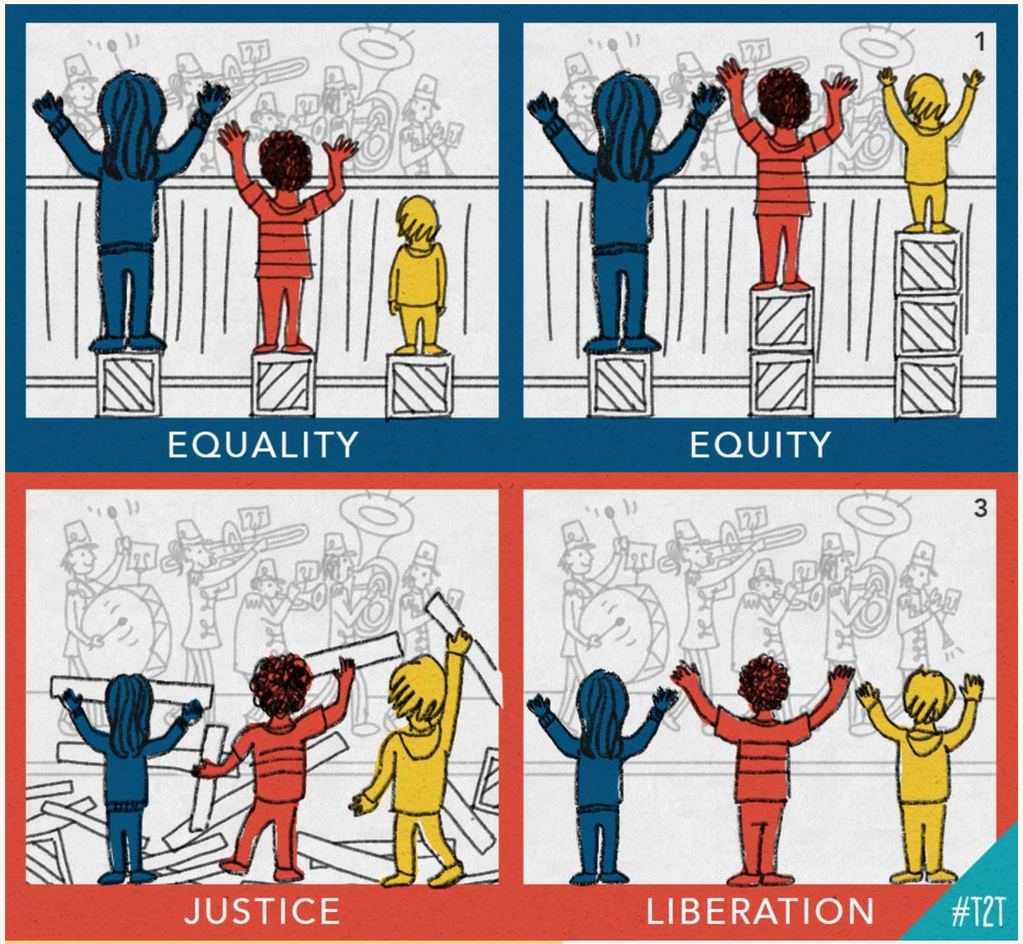
March 19, 2024 **Press Release**

Washington, D.C. — Congressman Greg Murphy, M.D. introduced the *Embracing anti-Discrimination, Unbiased Curricula, and Advancing Truth in Education (EDUCATE) Act* to ban race-based mandates at medical schools and accrediting institutions.

"American medical schools are the best in the world and no place for discrimination," **said Congressman Greg Murp** *compels medical schools and accrediting agencies to uphold colorblind admissions processes and prohibits the co certain political opinions. Diversity strengthens medicine, but not if it's achieved through exclusionary practices. Med doing the best job possible in every circumstance. We cannot afford to sacrifice the excellence and quality of medic prejudice and divisive ideology."*

"For both the health of American patients and the good of the next generation of physicians, it's important that medic discrimination," **said Congressman Brad Wenstrup, D.P.M.** *"Physicians should treat patients as they would themselve being forced to pledge, affirm, or adopt tenets that have infiltrated higher education. This bill helps ensure that best followed equally for all and keeps our nation's future doctors focused on caring for patients."*

"Allowing rebranded race-based discrimination to infiltrate medical education is dangerous for future doctors and pa **Goldfarb, Chairman of Do No Harm.** *"I have witnessed firsthand the alarming rate at which DEI ideology has spread the country. If we fail to stop it, we risk a generation of physicians ill-equipped to meet the needs of their patients. Do Murphy for taking this critical first step to end harmful DEI practices and make academic excellence the priority for n*



"Equality is everybody having a pair of shoes. Equity is providing everyone a pair of shoes that fit."

- Enid Lee

EQUALITY

The assumption that everyone benefits from the same supports. It is equal treatment.

EQUITY

Everyone gets the supports they need.

JUSTICE

Everyone can see the band perform on the other side without supports or accommodations because the cause(s) of the inequity was addressed. The systemic barrier is being removed or corrected.

LIBERATION

EQUALITY IS NOT THE SAME AS EQUITY, AND ULTIMATELY WE ARE STRIVING FOR JUSTICE.

How do we attain health equity?

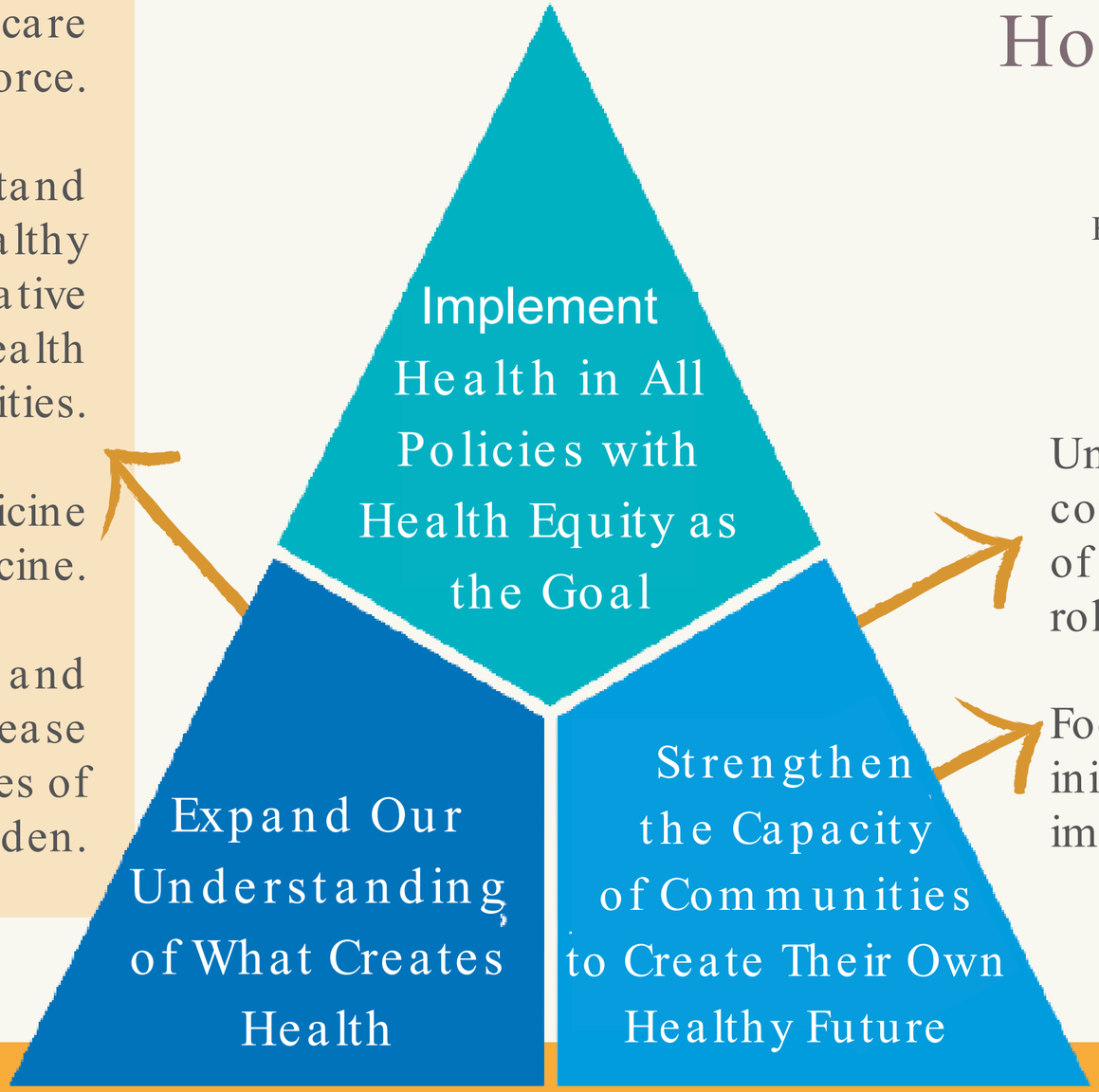
Be critical of what we take for granted.

Hire a diverse healthcare workforce.

Train staff to better understand what creates healthy communities and how narrative shape actions to reduce health inequities.

Move from Race-Based Medicine to Race-Conscious Medicine.

Always consider structural and social determinants of disease when discussing the causes of unequal disease burden.



Understand that patients will be coming in with lived experiences of bias and acknowledging its role in attaining wellbeing.

Focus health interventions and initiatives on communities most impacted by health disparities.

Thank you!

QUESTIONS?

@joelbervell
I'd love to connect with you!