



Why the Color of Your Skin Can Affect the Quality of Your Diagnosis

By Helene M. Epstein

Kevin Wake called 911 as he realized he was beginning to have a stroke. By the time the ambulance arrived, he was unable to speak or use his right side. He was conscious and could hear and see everything but couldn't respond. The EMTs presented Kevin to the emergency room as a suspected overdose based on just one observed fact: he was a black man in Chicago. They didn't know he had called 911 or that he had said 'stroke' to the operator. They didn't know he was a successful pharmaceutical sales representative. He says he could hear the emergency room staff discuss his non-existent overdose. He became so angry that in a miraculous burst of strength he finally managed to signal for a pen with his left hand. Kevin scratched down three words that saved his life: *sickle cell stroke*.

When we are in need of medical attention, we come expecting to be helped by experts with care. Patients of color in America have learned to check their expectations at the door and replace them with unanchored hope.

If you are a patient of color, especially if you're of African ancestry, your chances of misdiagnosis are greater than white patients', and you have higher odds of suffering greater harm from diagnostic errors than they do. This holds true despite how wealthy, well educated, or influential you are.

Ronald Wyatt, MD, an internationally known patient safety expert and health equity champion, says, "For too long we have skirted the issue. Clinical decisions made by those with racial bias lead to harm and preventable death." Dr. Wyatt is also a member of the board of directors of the [Society to Improve Diagnosis in Medicine \(SIDM\)](#).

For patients of color, the unequal medical care and quality of the diagnosis received isn't due to just location, education, or income. It's also at times due to healthcare professionals' cognitive biases, along with decades of clinical studies that examined only white, male bodies, and a lack of understanding about the social determinants of biological illnesses.

Overall, there are five complex factors that impact diagnosis for patients of color:

1. Explicit Racial Bias
2. Implicit Racial Bias
3. Missing Data
4. Lack of Trust
5. Reduced Access

1. **Explicit racial bias**

Perhaps this is what comes to mind first: pure discrimination. It's true that despite their education, some doctors and nurses are prejudiced.



David R. Hunt MD, a renowned patient safety expert, acknowledges that what exists in society is often mirrored in the field of medicine. He currently serves as Medical Director, Patient Safety, for the Office of the National Coordinator for Health IT. Dr. Hunt believes we've always had groups who receive poorer care. "The problem is multifactorial but at its root is the systemic effects of racism that we see in all other aspects of our culture...I think it would be remarkable and surprising if the general field effect of this bias *wasn't* present in health care."

It's difficult for people to admit how prejudice might influence their diagnostic decisions. Dr. Wyatt says when he discusses disparity of care with white physicians, "Their first reaction is almost visceral. They object, 'I'm not a racist.'" Without an objective measure of who is and who isn't racially biased, we can't learn how much it might impact their medical decisions.

We do know how the patients feel and what they report. According to the [2019 Pew Report Race in America](#), the majority of people of color – 76 percent of blacks, 76 percent of Asians, and 58 percent of Hispanics – "say they have experienced discrimination or have been treated unfairly because of their race or ethnicity." In that same report, 59 percent of blacks and 26 percent of whites agree, "blacks are treated less fairly than whites when seeking medical treatment."

Unfortunately, it is incredibly difficult to alter individual personal biases. Emergency patients in the middle of a crisis, like Kevin, are in a real bind. If possible, have someone you trust advocate for you. If you are confronted with a healthcare professional you believe is explicitly biased, seek an alternative medical practice, share the information with family and friends, and report them to the [appropriate state medical board](#).

2. Implicit Racial Bias

Everyone reading this experiences some sort of implicit bias daily. The term simply means that our brains are observing and grouping data incorrectly. It happens because we can only process what we experience. A [Scientific American](#) article defined implicit bias as a "tendency for stereotype-confirming thoughts to pass spontaneously through our minds... sometimes leading to discrimination even when people feel they are being fair." One [study](#) suggests, "implicit biases are primarily unconscious and do not imply overt racism."

Implicit racial bias is a type of cognitive bias. We've discussed in detail how doctors' cognitive biases can get in the way of an accurate diagnosis and affect other medical decisions. [Click [here](#) to learn more about cognitive biases.] Implicit racial bias can play a big role when diagnosing patients with darker skin.

The two most common ways implicit racial bias affects diagnosis are dismissing the patient's information overall and downgrading the scope and quality of their pain.

Not Credible Witnesses?



Patients know when their voice doesn't count in a medical encounter. This applies to all races, ages, and genders. [Read [Feeling Dismissed and Ignored by Your Doctor?](#) to learn more.] Many patients feel judged and discarded based on an unchangeable fact of their existence. For patients of color, evidence and experience show this to be a common problem.

According to Tina Sacks, PhD, Professor at the Center for Research on Social Change at the Institute for the Study of Societal Issues at University of California at Berkeley, "Black women are not considered credible witnesses to their own conditions." Professor Sacks is the author of the book [Invisible Visits: Black Middle Class Women in the American Healthcare System](#). Sacks notes many of her study subjects said, "the main issue was not being believed once they were in the healthcare system... and they ended up not getting the kind of treatment they thought they should."

Dr. Wyatt agrees: "The first thing people see is not your character but your skin color." He shares a story about his visit to an emergency department as a patient when he was head of patient safety for The Joint Commission, the organization that accredits healthcare providers. He was experiencing a very high fever, over 103°F. Feeling weak and lightheaded, he took some Tylenol to reduce his fever and headed to the ER.

He didn't identify himself as a doctor. "I felt totally disrespected from the moment I arrived. The triage nurse rejected my report of high fever and held the thermometer close to my eyes in a dismissive way as though to say, 'See? Your temperature is normal.'" An administrator came in with the wrong patient records, argued with Dr. Wyatt, and asked for his ID. The ER doctor never fully examined him, never looked in his eyes, and never even came all the way into his exam space. A different nurse arrived to give him oral antibiotics. "What are we treating?" Wyatt asked but the nurse didn't know. Eventually, his fever spiked and he was dismissed with the instructions to take another Tylenol when he got home. All of these hospital staffers were white.

Joyce E. Balls-Berry, PhD, is a psychiatric epidemiologist and health educator currently working on health disparities, health equity, and aging at Mayo Clinic in Rochester, Minn. As an expert in this field, Dr. Balls-Berry has taught doctors and researchers to ask themselves, "Who are we when we walk into the room?" She says we all have biases and need to be aware of the "[microaggressions and microassaults](#)" they can cause.

Dr. Balls-Berry experienced her own fifteen-year long misdiagnosis. "I can tell you that once I got the right diagnosis, I was upset," she says. She wonders if the cause of the diagnostic error was the "newly-minted" doctor's inexperience or the difference in their race. She notes that getting the proper diagnosis only required a "simple outpatient surgery" that wasn't ordered. She was finally referred to a renowned doctor in another specialty "who happened to be of African ancestry." Dr. Balls-Berry went into the diagnostic surgery with a pain level of eight and came out with a pain level of two. "It changed everything," she marveled. The specialist who diagnosed her accurately told her it happens too frequently with black women patients.

Ignored Pain



Identifying a patient's level of pain is a diagnostic decision. One of the most common examples of implicit bias in medicine is the denial or limitation of pain medications to black patients for situations where white patients routinely get them. A [deep dive into 20 years of studies](#) confirmed that patients of color were far less likely to receive any pain medication, and the situation was significantly worse for black patients. Studies have revealed denial of a patient of color's pain occurs widely when treating stomach pain, appendicitis, labor pain, knee pain, migraines, and many others. [A study of emergency medical technicians](#) indicated they also routinely gave less pain medication to black patients in pain.

Professor Sacks notes many texts have been written about a "biologized notion of race" that is based on the idea "that black people are hardier than white people, can withstand more pain, and that the most drastic measures can be taken and it will be fine." She adds, "This is a fundamental devaluing of what it means to be a black human being."

[One study](#) explored medical students' and residents' (new doctors) false biological beliefs about black and white patients. The students and residents studied medical case files that indicated each patient's race. Almost 90 percent of the white medical residents participating agreed, "blacks' skin is thicker than whites." The study also showed these same residents "rated the black (vs. white) patient's pain as lower and made less accurate treatment recommendations."

In the real world though, the opposite is true. "[African Americans report](#) higher levels of pain in clinical conditions such as glaucoma, AIDS, migraine headache, jaw pain, postoperative pain, myofascial pain, angina pectoris, joint pain, non-specific daily pain, and arthritis, compared to whites."

Kevin Wake's [Sickle Cell Disease](#) (SCD) is a genetic blood disorder originating in sub-Saharan Africa. The misshapen red blood cells get stuck in veins like a crowd trying to leave a championship game, too many bodies headed for the same exit. This prevents red blood cells from delivering enough oxygen to the body. It can lead to tissue death, immense levels of pain, and strokes, like Kevin's.

The majority of the 100,000 patients living with SCD in America are black. Stories and [studies](#) routinely reinforce that SCD patients don't get pain relief as quickly as renal colic patients do, a condition that primarily affects white patients. Both have abrupt onset and high levels of pain, but reported pain levels are higher in patients in sickle cell crisis than with renal colic.

Years before Kevin's SCD-induced stroke was mistaken for a drug overdose, he waited over six hours in a Dallas suburb emergency room for pain medication in the midst of an excruciating sickle cell pain attack. He says they dismissed him as a drug seeker despite sharing his diagnosis with the triage nurse because he was new to town and black. Finally, six-and-a-half-hours after he arrived, the emergency staff reached his doctor, who confirmed Kevin's SCD, and gave him intravenous pain medicines.

Kevin is now a volunteer patient advocate for a [Kansas City based Sickle Cell organization](#). He wears a medical alert bracelet for SCD in the hopes this solid evidence of his condition will help pre-empt biases that might impact his quality of care.

Children in Pain



Black children's pain is also often undertreated. [Study](#) after [study](#) demonstrate that children of color in pain receive less pain medication than white children do under the same medical situation.

"It's actually cruel not to make sure you alleviate the pain," says Dr. Hunt, referring to a large [study](#) on children diagnosed with appendicitis in the emergency room. "Kids aren't going to be drug seekers. Kids will give you the truest and most accurate assessment of where they are...The fact that they were denied and had substandard pain care is just heartbreaking." He adds they also received less pain relief medicine after surgery.

Dr. Hunt attributes it to implicit, not explicit, racial bias. "If you point it out, in no particular case did the practitioners seem to think, 'Oh I'm going to make sure that I give this person less,'" he said. "It was 'I don't think that they'll need as much.'" The same is true for [children of color with abdominal pain](#), chronic pain, and even [after gallbladder surgery](#).

3. **Missing Data**

The best way to counter inaccurate beliefs is with science and fact. However, for decades, medical study participants were limited to white men. Studies about young, mostly healthy, white men don't fully apply to [women of any race](#) or to patients of color. [Even now, black patients are poorly represented in clinical and drug studies](#), in part due to difficulty recruiting patients of color to participate in research studies. [See [A Lack of Trust](#) below.]

If the studies don't include black, Hispanic, and Asian bodies, then medical education and training based on those studies won't examine differences in care and treatment. These knowledge gaps about patients of color hamper diagnostic reasoning of doctors and nurses equally, regardless of the caregiver's race.

For example, there is a [lack of training and education in diagnosing diseases on dark skin](#), according to Art Papier, MD, CEO of [VisualDx](#), a diagnostic tool for healthcare professionals. "There has been a persistent bias in most of the literature to showing examples of disease on light skin," Dr. Papier says. He gives two examples; erythema is a sign of inflammation, and purpura is frequently a sign of systemic disease such as vasculitis. These can be difficult to recognize since the reds and purples on light skin appear as dark brown or black on deeply pigmented skin. He adds, "We do not adequately teach physicians about these important physical exam clues."

We also know black patients are more prone to certain health conditions, including stroke, high blood pressure, heart disease, and diabetes. They are more likely to die from cancer, especially lung cancer, than whites. According to a [paper](#) coauthored by Dr. Wyatt, "black-white differences in mortality have been estimated to account for the premature deaths of 260 African Americans every day." Those deaths are due to both diagnostic and treatment errors.

The bigger diagnostic question is why do these conditions exist in one group more than another? The goal of diagnosis is to identify the core reason for health conditions so they can be treated effectively.



For example, high blood pressure can have several causes, from genetics to lifestyle issues to serving as a symptom of other diseases. Each answer suggests a different treatment plan.

There is a growing chorus of experts and studies linking health disparities and exposure to daily discrimination. This takes a toll on the body, leading to a greater likelihood that you will get high blood pressure, stroke, and/or heart disease. The [more often you experience discrimination](#), the greater the impact on your health. It can become “[death by a thousand cuts](#)” instead of the natural onset of disease due to aging or family history. This is similar to the [decades of studies](#) that correlate [Adverse Childhood Experiences \(ACEs\)](#) to a lifetime of physical and mental health issues among people of all races. If your symptoms are caused or worsened by discrimination, will a pill solve them, or should the doctor recommend additional solutions, like meditation?

4. **A Lack of Trust**

Establishing trust with your healthcare professional is essential to a healthy relationship. But research has found there is deep-rooted [distrust among people of color](#) for medicine and doctors in general. In addition, there has been an established “[history of adverse treatment](#) of blacks by the medical system, dating back to slave experimentation.” Dr. Wyatt adds, “There is mistrust and distrust among black patients. First, they have to work through memories of Tuskegee and Henrietta Lacks.”

He is referring to two examples among many of medical research projects that hurt or ignored the black patients who participated. Tuskegee refers to the Tuskegee Syphilis Study. In 1932, the U.S. Public Health Service studied six hundred black men with and without syphilis in exchange for medical exams, food, and free burials. The “research” went on for 40 years; long after penicillin was available to treat the disease. The researchers never got patient consent, never explained what they were studying, and never treated any of the patients.

Henrietta Lacks was a black cancer patient who sought care at Johns Hopkins Medical Center in 1951. Her cervical cancer cells were the first successful cells cloned for use in medical research. Until then, no cells would survive the process. She was never informed or compensated. The scientists who cultivated and sold her cells made millions, as did the companies who have used them successfully for testing drugs and treatments.

This long history has resulted in patients of color avoiding participation in clinical studies and regular visits to their doctors. Professor Sacks says, “Of course people are not going to want to try to go into the doctor because they might be treated in a way that lacks respect.”

5. **Reduced Access**

Barriers to getting medical care when you need it can lead to poorer health overall. One of the first hurdles is getting seen by a healthcare professional. On average, [black and Hispanic patients wait longer than white patients to be seen at their physician’s office](#) and [in the emergency department](#). A recent [study](#) also found that if the scheduler thinks you are black or Hispanic, chances are your



appointment will be “further in the future despite having the same insurance status” as perceived white callers.

In addition, [patients of color have lower rates of health insurance overall](#) and often live in [neighborhoods with fewer primary care doctors and specialists](#). Waiting may mean delayed diagnosis and higher rates of complication and death due to conditions like stroke, diabetes, high blood pressure, heart disease, and cancers. Dr. Wyatt notes delay can also lead to far more invasive treatments when simpler ones would work.

[Appendectomies](#) have better outcomes if the surgery is a minimally invasive [laparoscopic procedure](#). But black patients have a higher rate of open surgeries. Dr. Hunt notes one factor is how advanced the appendicitis is when the patient presents for care; delay is dangerous. Black appendectomy patients have [higher mortality rates](#). It’s unknown which plays a bigger part: lack of access or lack of trust.

What Can Be Done?

Experts agree that disparity of care isn’t the patient’s job to solve. The problems and the responsibility for addressing them lie with government, healthcare organizations, and frontline clinicians. However, as empowered patients, you can take the same [steps we recommend all patients follow](#), including becoming knowledgeable about your symptoms and risks, and getting a second opinion before any surgery or complex treatment plan (like chemotherapy). In addition, you can advocate for these five changes in your community.

- 1. More doctors of color.** When doctors and patients share cultural touchstones, care is improved. Right now, fewer than six percent of credentialed doctors are black and another six percent are Hispanic, while the two population groups currently represent more than one-third of the US population. The issue has been two-fold: medical school acceptance rates for Hispanic and black applicants are low, and medical schools and healthcare organizations need to mentor, support, and promote doctors of color.
What you can do: Look for a [physician of color in your area](#) and visit her regularly. Support the [National Medical Association \(NMA\)](#); the organization that represents African American physicians.
- 2. Teach cultural humility.** Training in cultural competency has been ineffective. Dr. Wyatt quoted Don Erwin, MD, a New Orleans-based national advocate for addressing health disparities, “Cultural sensitivity training does not help. It just makes for better educated racists.” Cultural humility is a better option; it’s when doctors listen without unnecessary interruption and let patients’ goals and concerns guide their response.
What you can do: Join your local hospital’s [Patient and Family Advisory Council \(PFAC\)](#) and advocate for training and a change in culture.



3. **Demand evidence-based medicine.** Dr. Hunt shared a [study](#) in which disparity of care disappeared when high-functioning hospitals' rates of compliance to evidence-based care rose from 80 percent to 95 percent. Those who were only able to improve to an 80 percent level of compliance still had disparity of outcomes. "Racism is intransigent," he says.
What you can do: Request relevant health screenings if your doctor doesn't initiate them. [Here](#) is a guide from the Centers for Disease Control to health-specific issues for African Americans, and [here](#) is a list of screenings by gender and age (but not race) that are helpful to bring with you to your next appointment.

4. **Remove outmoded concepts from physician references.** A [group of medical students](#) banded together to challenge several of the up-to-date medical guidelines. Professor Sacks says, "The students told me that they were troubled to find that the standard references were different based on whether someone was black or white, Asian or Native American...there is a social reality that they are treated differently in the world and so have different health outcomes."
What you can do: Support the [National Medical Association \(NMA\)](#) in their efforts to improve research and training.

5. **Increase grants to medical researchers of color.** [White researchers get the most governmental research grants](#), but they have difficulty recruiting black participants. In order to improve participation by patients of color, funding more black and Hispanic researchers may be an answer. In turn, non-white researchers may also approach the issues of disparity with more empathy and personal experience, leading to new insights.
What you can do: Support the [National Medical Association \(NMA\)](#) in their efforts to improve research.