

MOVING FROM INJUSTICE TO EQUITY: A TIME FOR THE PHARMACY PROFESSION TO TAKE ACTION

COMMENTARY

Examining the Inclusion of Race and Ethnicity in Patient Cases

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Health disparities continue to exist in the United States, with the most significant differences in care occurring between racial groups. Racial health disparities are largely a result of the strong association between race and structural inequities, (differentials in the distribution of power, resources, opportunities). The use of case-based learning is common practice in pharmacy education, and the race of the patient who is the subject of the case is often included out of convention. In some cases, race is included to inform treatment based on guidelines developed from epidemiological and clinical studies that link race to disease by conferring biological significance to race categories. This continuing use of race and ethnicity to guide treatment contributes to racial health disparities and may further perpetuate existing provider implicit bias. This paper discusses the pedagogical approach of using patient cases and the convention, propriety, and implications of including race in patient cases, and guides pharmacy educators in how to use information on race.

Keywords: race, patient case, social determinants of health, pharmacy education, structural inequities

INTRODUCTION

As the United States' population grows more diverse, health disparities continue to exist, with significant differences in care and outcomes occurring along racial lines.^{1,2} When not presented in the proper context, these health differences erroneously suggest a race-dependent causality.³ However, race is a social construct.^{1,4} There is a strong association between race and structural inequities, which are the systematic differences in the distribution of power, resources, opportunities, and exposures across racial populations at the global, national, and local levels.^{5,6} These avoidable inequities largely explain the poorer health status and outcomes observed in populations currently considered as racial minorities.^{5,6} Evidently, race and ethnicity have implications in health care and outcomes.⁷ However, the significance of race in health is nuanced, given its intersection with other social determinants of

health (SDH), which are the conditions in which people are born, grow, live, work, and age.⁸ SDH are the major contributors to the inequities in health care and the resultant disparities in health status and outcomes.⁸ While addressing SDH in pharmacy education is imperative, this must be accomplished without inadvertently encouraging racism. The critical question then becomes whether racial descriptors can be used in patient cases in pharmacy education without contributing to racial health disparities and perpetuating implicit provider bias.

DISCUSSION

Race as a Social Construct

Race is not biological as there is no common makeup that distinguishes one racial group from another.⁹ Rather, race is socially constructed.¹⁰ Social construction is a phenomenon that occurs when people in a society agree to a concept not previously existing.¹¹ Racial categories were created by society as a means to subjugate brown and black people and advantage whiteness over all else based on a constructed interpretation of physical features and

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attributes, such as skin color.¹² The use of these physical attributes in racial categorizations are not consistent across the globe and have no association with biological traits.¹³ In fact, the literature suggests that there are often more genetic variations within than between racial groups.^{14,15}

Even if biological differences do exist between races, given the mixture of racial identities that has resulted as people of different races have come together to procreate, identifying a clear distinction between races based on biological differences would likely be impossible. Being a social construct, racial identity can differ, depending on place, for example, a bi-racial person having one Black and one White parent who is considered Black in the United States might be considered White in West Africa. The construction of race is also fluid. Over time, there have been shifts in its meaning and attribution, historically for political and economic gains.¹⁶ Given this context, we advocate for careful consideration of how race is used in patient cases throughout the pharmacy curriculum. The use of race is not limited to patient cases and appears frequently in examination questions, textbooks, and other instructional materials. In this paper, we focus on patient cases, a common convention in didactic and experiential pharmacy education. However, our recommendations are applicable to other instructional materials. For the purposes of this paper, the term *racism* refers to structural and interpersonal racism.

The Pedagogical Approach of Using Patient Cases

Case-based learning (CBL) is supported by a principle of adult learning theory, which posits that learning is more effective with the use of realistic and relevant subjects, and enhanced by vivid language and semantic cues.¹⁷ Educators are therefore encouraged to make use of “active and colorful” language and realistic examples to support the creation of mental models for learners, which triggers knowledge recall during future clinical practice.¹⁸ The narrative of patient cases has tended to include the race and ethnicity of patients, similar to medical records and histories in many “real-life” patient encounters. As students are tasked with using the information provided to reach resolutions and develop treatment plans, race can easily be perceived as a biological variable for consideration rather than the social construct that it is. Aggregated, demographic characteristics of patients provide critical information for population health, which allows for changes in health policy and quality improvement in health care delivery to more effectively meet the health needs of patient groups; however, race may be misused or misinterpreted at the individual level. Given the historical context of structural racism in the United States, ie,

long-standing laws, policies, and processes that have systematically disadvantaged communities of color, we reflect on how the inclusion of race in patient cases can be both beneficial and harmful if not discussed appropriately.

We start by offering a patient case and reflection questions. We realize that readers have a range of backgrounds and levels of knowledge regarding racism. As readers consider the reflection questions, we encourage you to lean into your emotions and the immediate associations you make about the patient case.

Patient Case: A 45-year-old woman with a history of hypertension and diabetes presents to the pharmacy in a family medicine clinic for her new prescriptions. She is accompanied by four children under the age of 10. She tells you she is in a hurry to get the children back home and then must rush to cover a work shift at the hospital for her colleague who is ill.

Reflection Questions: What assumptions came to mind about this patient? What work/role did you subconsciously assign this patient? Did you assume she is a surgeon? A nurse? A pharmacist? A physician? Facilities staff? What race/ethnicity did you associate with this patient? How might your assumptions inform how you approach the treatment plan for this patient? In considering the case above, what thoughts came up for you as a pharmacist? How would having data on race or ethnicity have influenced your thoughts and/or decision-making about the patient care plan?

The Convention and Propriety of Race Data in Pharmacy Education

While racial and ethnic identities often intersect (ie, they exist together and not in silos) and how people identify can be complex, we often see race and ethnicity used as a single identifier that can carry many assumptions. Including race and ethnicity data in patient cases without reference to its social construction and no discussion of relevance to treatment likely reinforces stereotypes and existing implicit biases.¹⁹ For example, an African-American patient may be immediately associated with low socioeconomic status, or a LatinX patient presumed to have low English proficiency, even when there is no patient information confirming these assumptions. Conversely, a mother who has multiple children and receives government subsidies may be unintentionally associated with being a woman of color and/or a single mother. Making such associations, typically driven by implicit biases, has been referred to as the “peanut butter & jelly effect,” ie, peanut butter is often associated with jelly.²⁰

In some instances, a patient’s race is included when the treatment protocol indicates differential treatment

allegedly based on race or ethnicity, predicated on the underlying assumptions of racial differences in physiology and/or genetic makeup.²¹ However, the subjective and sociological nature of racial categorization does not lend credence to the physiologic distinctions inferred. The limitations of the study results from which these guidelines and protocols were developed are often not included in Doctor of Pharmacy (PharmD) curricula, rendering a major point of consideration, ie, that race is a social construct, largely missing in discussions with students.

Students, like faculty and anyone else, come into the pharmacy program with their own associations and assumptions about race based on their own lived experiences and socialization. Epidemiological and clinical data presented to them often highlight the disparities in morbidity and mortality by race, potentially perpetuating the stereotypes and associations of race with diseases. The association of diseases with race also signals a vulnerability in specific populations, which tends to elicit a “problem-seeking” (looking for a problem when none is presented) vs “growth-based” (listening to understand and learn) approach to patient care from students. Cases can become no more than a linear categorization of obstacles the students must overcome or “solve.”²² Below is a reflection from a course assignment by a third year PharmD student that exemplifies this:

Another area of bias I learned about myself volunteering at (a free clinic) this semester is that I often assume that patients who are seen there don't take care of their health, eat unhealthy foods, don't get enough exercise, aren't adherent to their medications, etc. That came out in the way I interviewed a patient. I was asking him questions trying to find something he was doing wrong when the truth is he was managing his diabetes just fine and just needed some refills on his medications. So even though we talk about problems with patients a lot in school, I need to have a strengths-based mindset when meeting with patients and realize that they might be doing everything we told them to do and not always be out to find a “problem.”

By explicitly discussing implicit biases in the context of SDH, educators can help bring to light issues around racism and prevent contributing further to racial health disparities.

The Implications of the Inclusion or Exclusion of Race/Ethnicity in Patient Cases

Because race is socially constructed, careful consideration should be given to how race is used in medical treatment and the research that informs this practice, which is sometimes the premise for inclusion in patient cases used in health professions training, including pharmacy education. Race-based medicine refers to medical practice that is guided by research in which race has been

characterized as a key biological variable, and findings translated to clinical practice, leading to differential treatment based on race.²³ Epidemiological and clinical studies continue to link race to disease by conferring biological significance to race categories from hypothesis to the application of findings.²³ These inform the development of treatment guidelines and protocols based on the underlying assumptions of racial differences in physiology and/or genetic makeup.²³ There are examples in various fields including nephrology,^{24,25} cardiology,²⁶⁻²⁸ and obstetrics^{24,29} (Table 1). This by default creates a strong association (in the mind) between race and disease.

The examples in Table 1 illustrate how the continuing use of race and ethnicity to guide treatment not only contributes to disparities in health outcomes but may further perpetuate existing provider implicit bias. Provider implicit bias leading to racial discrimination in health care is well documented and shown to contribute to racial and ethnic health care disparities.³⁰⁻³² Instead of race-based medicine, we advocate for clinical care that takes into consideration the strong association between race and structural inequities, which largely explains the disparities in health status and outcomes.^{5,6,33} By considering race as a social construct, racial differences in disease and/or health outcomes can be properly contextualized, more accurately interpreted, and adequately addressed, through the lens of the structural inequities that drive them.

Associations and assumptions are made implicitly and automatically as individuals and as a society.³⁴ Implicit biases within our subconscious, allow us to make instant associations (again, the “peanut butter & jelly effect”); a sign of normal cognitive functioning. Each individual has biases based on their lived experiences, familial narratives, and socialization throughout their lives. These are often reinforced by media portrayals of stereotypes, the cultural norms and philosophies of institutions and industries, etc.³⁵ The health care system and providers are not exempt from these associations/assumptions, being integral parts of the society that creates them.^{36,37} However, being unaware of our implicit biases can lead us to make assumptions about our patients, eg, what they have or do not have access to, their health-related behaviors, that may perpetuate structural racism through our care decisions. Unaddressed, these associations and assumptions inevitably influence health care delivery and directly impact patient care.^{36,37}

Recommendations to Pharmacy Educators

Rather than the exclusion of race data as descriptors, we offer that consideration be given to the discussion of race with students, and the intersection with SDH, as part

Table 1. Examples of Race-Based Medical Treatments

Nephrology ²⁴	The estimated glomerular filtration rate (eGFR) used to assess renal function is adjusted upwards for Black patients based on the assumption of higher muscle mass and therefore higher serum creatinine. ²⁵ Without adequate supporting empirical evidence, this adjustment likely overestimates renal function, which may cause delays in treatment and minimization of potential adverse drug effects associated with renal function and result in worse outcomes. ²⁴
Cardiology ²⁶	Per Joint National Commission (JNC) guidelines, prescribers have been less inclined to treat hypertension in Black patients with angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin receptor blockers (ARBs). These guidelines are based on study findings that showed less effective blood pressure-lowering potential of ACEI/ARBs in Black patients than in White patients. ²⁶ Furthermore, using race to dictate therapy also means that Black patients who would otherwise benefit from ACE/ARBs may not be offered this treatment. ²⁶ The first race-based drug, BiDil, approved by the FDA in 2005 for treatment of heart failure in African Americans was not shown to be more effective in this population compared to the general population. The drug approval by the FDA came under strong scrutiny and met with backlash as many experts questioned the rationale of the use of race as a biological variable in the preapproval investigation. ^{27,28}
Obstetrics ²⁴	African American and Hispanic women in the United States continue to have higher rates of Caesarean section than White women. The Vaginal Birth After Cesarean (VBAC) algorithm used to predict the risk posed by vaginal birth following a previous cesarean section, includes race as a predictor, with a higher risk for African American or Hispanic women. The algorithm does not include marital status and insurance type, variables that were also significantly correlated with success in VBAC. ²⁹

of a longitudinal process that may start didactically but extend into experiential education. If educators find that not enough time has been allocated to provide relevant explanation or discourse, we recommend exclusion to avoid perpetuating implicit biases and associations. Nonetheless, the inclusion of race data can be beneficial in certain circumstances.

Race data can be beneficial when distinctions based on the appearance of physical features are implicated in symptomatology, treatment, and/or outcomes. A clear example is in dermatological conditions (Table 2, Case A). In cases where race and ethnicity are relevant to treatment, a diverse range of patient identities should be included in the cases for more accurate patient representation. In case A, it is vital to include race as the presentation of dermatological conditions differs by skin tone. Stating that the patient is Black and including a photo of the skin area affected would be beneficial, particularly because skin tones differ even within racial groups. This is instructive for students, given that medical texts have typically used a White patient as the standard and norm for when outlining how signs and symptoms present,³⁸ leading to missed diagnoses and misdiagnoses of skin conditions among patients with darker skin tones.^{39,40}

The inclusion of race data can also be beneficial when the learning objective is to highlight health disparities and/or population health. With persisting racial disparities, there follows an increasing need and opportunity

for pharmacists to engage in population health, even as they provide individualized patient care. The learning objectives of the patient cases used in this regard should therefore be to highlight and explicate racial disparities. Here, we advocate for more “outcome-based” learning with clearly articulated objectives guiding the development of the learning activities.⁴¹ This pedagogical paradigm supports CBL and should guide the use of race in patient cases (Table 2, case B). When the inclusion of race and ethnicity data on a patient case is intended for that purpose, consider taking the following steps: explicitly state the objectives of the learning activity; include further context, specifically, the relevant SDH; discuss the intersections and associations of SDH with race/ethnicity using supporting empirical data; discuss the relevance to patient care and population health (as applicable); intentionally discuss implicit biases and how assumptions about patients may influence perception, and consequently treatment; provide alternative scenarios to address any existing stereotypes/biases (this can be done in a variety of ways, eg, changing race/ethnicity or changing SDH, while maintaining the same racial identity); invite faculty with relevant expertise to co-teach if needed.

Delving Deeper

Consider your response if you were given the following additional information about the 45-year-old woman

described in the hypothetical patient case presented earlier: the four children are from a foster home. The patient volunteers at a non-profit agency that coordinates foster care and works as a medical radiology technician. How would this change your perception of the patient? What if the patient is Black? What if she is White? How would this influence what you assume about, or characters and behaviors you associate with, the patient? How may this inform the patient's care and/or how you view the patient's outcomes? The point of recognizing our implicit biases and associations is not to elicit guilt, but rather to bring these biases to our awareness so we can address them, and as a result, be able to serve our patients, students, and colleagues better.

When you intend to use a patient case for a learning activity, it is a good opportunity to pause and reflect on the following: Is race relevant here? Can students discuss the case effectively and achieve the learning objective(s) without any data on race? If race is included, are negative SDH also included in that case, perpetuating the association between race and negative SDH? For instance, if you present a patient case involving a person of color, do they have immense wealth, a high level of education, and strong social connections, or are they generally associated with lack of access, lack of wealth, intimate partner violence, "at risk" somehow, and/or have a low level of education? If SDH factors are present, will there be adequate effort and time given to discussing and addressing implicit bias and the impact of SDH on patient outcomes? If race is not included, students often assume that the patient is White. The feeling rendered by this assumption is captured by the following student reflection after being told during an examination that, because race was not included, she could assume the patient was White: "This left a feeling that to be white was to be normal, and that any other race would be odd and unforeseeable. I wondered if being white was irrelevant and if it was only noticeable to be non-white." This statement was submitted as a complaint by the student and not in response to an assigned prompt.

When a patient is presented as Black, indigenous person, or person of color, negative SDH descriptors often accompany the patient case, eg, poverty, being an undocumented immigrant, a single parent, a victim of intimate partner violence, having a history of illicit drug use, limited English proficiency, experiencing homelessness or unstable housing, living in a neighborhood with gun violence, and/or being a Medicaid recipient. However, positive SDH, such as having strong community connections, social support, use of food as medicine, individual/familial/generational wealth, high educational attainment, positive familial ties, strong faith-based communities, and access to communal resources/networks are often not

focused on as assets that patients may have and can leverage.

As educators, we all want our students to be engaged learners. We can achieve this by creating opportunities for students to deeply reflect on their patients and the assumptions they make that inform their care, and normalize asking questions and checking our assumptions, particularly under stressful working conditions.

Educators often feel they do not have the influence or agency needed to create change in courses, particularly when engaged in team-teaching with supervisors and individuals with positions of influence and leadership. For further reflection, we invite readers to explore their individual agency and power when it comes to shaping pharmacy education by reflecting on the questions presented in Appendix 2.

CONCLUSION

The inclusion of race and/or ethnicity data in patient cases can be useful to reflect the wide diversity of the US patient population. However, its inclusion without careful consideration of its relevance to patient care and/or population health likely perpetuates stereotypes. Conversely, complete exclusion of race and ethnicity means missed opportunities to educate students on how to objectively query scientific literature on race-related data; engage them in population health; and address their implicit biases, as these biases likely lead them to blame patients for health outcomes. Educators should therefore consider integrating discussions on race and implicit biases in their teaching, beyond patient cases, to increase awareness of implied associations and address those.

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Appendix 1. Samples of Patient Cases Illustrating More Appropriate Use of Race and Ethnicity

CASE A

The patient is a 32-year-old Black male who has asked to see the pharmacist. He complains of itching in the abdominal area, arms, and legs. A physical examination reveals gray patches that are dry and scaly.

Discussion Questions

- Q1. What dermatological condition does this patient likely have?
- Q2. What treatment is recommended for this condition?
- Q3. How would you counsel the patient on the use of your recommended treatment?

CASE B

Learning Objectives: At the end of this session, students should be able to

- i. identify their implicit biases and assumptions and discuss how these can potentially influence patient care
- ii. describe the associations between social determinants of health, patient care, and treatment outcomes

The patient is a 38-year-old male patient who comes to your pharmacy with a new prescription for a month's supply of emtricitabine and tenofovir alafenamide (Descovy). Your pharmacy primarily serves the Middle East and North Africa (MENA) immigrant populations. The patient tells you that he is excited to start the medication because it is not available in his home country. He tells you "These types of medicines are hard to come by in my country."

The prescription is from an HIV clinic in a neighboring town 30 miles away and you are unfamiliar with the prescribing provider. The patient tells you he is uninsured but his physician assured him that the medication would not be expensive.

While you work on the prescription, the patient goes to the cold/cough section of over-the-counter medications and quickly selects a bottle of Children's Tylenol Pain + Fever. The patient returns to the counter to inquire about the cost of the prescription. You tell him that the price for emtricitabine and tenofovir alafenamide (Descovy) without insurance is \$2,019. The patient pauses to consider the cost and then politely requests that you include the over-the-counter medicine in the total. He proceeds to pay for the prescription in full using a check.

Discussion/Reflection Questions

- Q1. As the patient's pharmacist, what additional information would you like to know while counseling him on his medications?
- Q2. Reflecting on the patient case, what are some biases that came to mind?
- Q3. What are other things you as the pharmacist may want to ask the patient?
- Q4. There is a possibility that the prescription should have been for emtricitabine and tenofovir disoproxil fumarate (Truvada), not emtricitabine and tenofovir alafenamide (Descovy) (see "Background knowledge to consider" below). However, biases could have created a scenario in the prescriber's mind where they assume this is the right prescription and the patient is hiding his sexuality from his community, thus traveling out of town to receive HIV consultation. How can you ensure that the patient has the appropriate medication?
- Q5. What type of support do you think the patient might need? Why do you think so?

Background knowledge to consider

Emtricitabine and tenofovir alafenamide combination (Descovy) is not FDA approved for the prevention of HIV transmission from vaginal intercourse.

MENA has the lowest HIV prevalence in the world.

Cost is relative to patients.

Being uninsured does not mean a patient cannot afford medical treatment.

Appendix 2. Reflection Questions for Pharmacy Educators

Where and how may you be able to create intentional time and space for your reflection on the discomfort and vulnerability around race and racism?

With the shared understanding that implicit biases and associations are universal and inevitable, how might you commit to being more aware of how your own implicit biases inform your teaching?

With the shared understanding that race is a social construct, how does this inform your appropriate inclusion of race data in patient cases? (ie, as a social construct vs. biologic construct)

If you include race data, is it always associated with a negative SDH? If so, could you juxtapose with the same case but include positive SDH to demonstrate how race is not a determinant of disease and push back on some implicit associations that society tends to make?

Where can you set aside time to discuss implicit bias and why race data may be relevant and/or debate how they may or may not perpetuate implicit biases?

What are the ways in which you can challenge the status quo within your own spheres of influence to change the way race data may be included not only in patient cases, but perhaps in practice as well?
