Racial disparities in the medical field

Dear healthcare students,
Dear healthcare educators,
Dear members of the healthcare education committees,

My name is Lidvine Ngonseu Harpi. I am a last year medical student at the University of Antwerp, and a board member of AfroMedica, an organization promoting diversity in the healthcare sector.
In the past 5 years of medical school, I questioned certain topics that were discussed in the lessons of our study program. Without being able to point out exactly what seemed wrong, I had a feeling that some things were not quite right. During the summer of 2022, I had the opportunity to work at the Institute of Tropical Medicine with the RECoRD (Race and Ethnic Conscious Research and Data)-research team (funded by the Population Data Science Hub at the Department of Public Health). This student job finally opened my eyes by confronting me with racism in healthcare. It enabled me to find the words to describe the odd feeling I had. With this letter I want to share with you the information I gained the past months, make you aware about racial disparities in the medical field, especially here in Belgium, and finally invite you to think critically about racism in healthcare. For I believe critical thinking is the first step towards very necessary structural change.

Key definitions

Understanding each other fully is essential when discussing important issues. For this reason, I find it necessary to briefly explain terms such as race, racism, racialized (minority) groups, race-based, and race-conscious approaches before continuing. The following definitions can also be found in the more extensive key definition list of the RECoRD Review Protocol.

Race, *according to the Canadian Institute for Health Information (CIHI), refers to socially and politically constructed differences among people based on arbitrarily chosen characteristics. Examples of these features are skin color, physical characteristics, accent or manner of speech, name, clothing, diet, beliefs and practices, leisure preferences, places of origin, and so forth. Although the sciences have been (and still are) heavily involved in the production of race and racial categorizations, there is no scientifically supported biological basis for racial categorization. However, societies construct races as 'real'. This has different and unequal implications for economic, political, social and cultural life.*

In order to indicate in the remainder of this letter, that I am talking about race as a social and political construct and not a biological one, I will from now on place race between inverted commas. In this way I want to make it clear that ‘races’ only exist because they were created by people in the course of history (more information on the history of ‘race’ can be found further on in this letter).

The American Society for Human Genetics has made several statements about ‘race’.
For example, humans cannot be divided into biologically distinct subcategories. This is validated by many decades of (genetic) research. Most human genetic variation is distributed

as a gradient, so distinct boundaries between population groups cannot be accurately assigned. There is in fact a considerable genetic overlap between members of different populations. Eneanya et al. articulate it clearly: "Population studies reveal only small differences in gene distributions between racial groups while showing greater variation between individuals of the same race." You can find more information on how genetics are reshaping the idea of 'race' here.

Since there is no scientific evidence for biological races, 'race' is a poor substitute for heredity or ancestry, as these last 2 do, in fact, have to do with genetic proximity and are better proxies for individual genetic traits.

Racism *is the total of organized systems within societies that cause avoidable and unfair inequalities in power, resources, capacities and opportunities for racialized minority groups. Paradies and his research team state as follows: "Racism can manifest itself through beliefs, stereotypes, prejudices or discrimination. This encompasses everything from open threats and insults to phenomena deeply embedded in social systems and structures. Racism can occur at multiple levels, including internalized (the incorporation of racist attitudes, beliefs or ideologies into one's worldview), interpersonal (interactions between individuals) and systemic, structural and institutional (for example, the racist control of and access to labor, material and symbolic resources within a society)".*

Contrary to popular belief, racism often happens in subtle ways. I would even dare to say that explicit and conscious forms of racism are a minority of the cases today in Belgium. Discrimination based on unconscious bias, on the other hand, is still very common. Everyone has bias, we all place people in boxes. (If you don't believe me, I challenge you to take an implicit association test.) These thought patterns help us to quickly assess situations. There is nothing wrong with these stereotypes, as long as we are aware of our own preconceptions. However, when these biases are also acted upon unconsciously, it can lead to discrimination. UNIA defines discrimination as treating another person unequally or unfairly based on their personal characteristics.

Universities and colleges are influential institutions where among others the healthcare workers of tomorrow are being formed. Therefore, the education they provide should be sensitive to contemporary debates surrounding the racist foundations of medicine and science. This means stepping away from a race-based approach towards a 'race'-conscious approach.

A race-based approach *to health and healthcare is based on a biologically essentialist conception of race according to which all members of a racial category are believed to have defined shared physical or genetic characteristics, or a specific biological essence. This assumption allows the members of the group to be seen, both by themselves and by others, not as individuals with personal traits, but rather as prototypes of the collective with identical traits and characteristics, which leads to stereotyping, essentialization, fixity and homogenization.*

A 'race'-conscious approach *to health and healthcare focuses on racial discrimination and racism as central issues, in contrast to the race-based approach. As a reference point, Cerdeña, Plaisime and Tsai introduce "race-conscious medicine as an alternative approach*

that emphasizes racism, rather than biological race, as a key determinant of illness and health, encouraging providers to focus only on the most relevant data to mitigate health inequities".

More information about a race-based versus 'race'-conscious approach in medicine can be found here.

Racialized (minority) groups *refers to those groups that are subject to racialization and are also minoritized/marginalized/underrepresented based on various characteristics such as skin color, migration status, citizenship, religion, culture, language or geographic location. To emphasize the process of racialization, some authors use the term 'racially minoritized people' (Milner & Jumbe) or 'marginalized racial groups' (Barber).*

Impact of racism

"**Racism is bad for your health**". This bold statement can be interpreted as short-sighted. However, I have found there to be 3 independent pathways that contribute to a connection between racism and the quality of health.

First of all, **people who belong to racialized groups, generally have worse health due to their socio-economic condition**. Racism is structural and occurs in all layers of society and in different sectors such as the labor market, the housing market and education. People who belong to a racialized minority group are, per definition, being discriminated against. This results in unequal opportunities and access to resources (e.g. lower income, higher cost for a lower quality home, lower level of education). In this way, racialization leads to a lower socio-economic condition. This condition is frequently associated with several unhealthy factors such as exposure to health related risk factors at work or at home, cheaper - often unhealthy - food, less beneficial social connections. Thus, People who are in lower socio-economic conditions generally have poorer health. Type 2 diabetes is, for example, more common in Belgians of Turkish and Moroccan origin than in the native Belgian population. A lower level of education within these ethnic minority groups is an explanatory factor for this difference in prevalence.

Second, **all forms of discrimination, even the anticipation of discrimination, can lead to physiological and psychological consequences.** First, violence due to racist motives can be the cause of physical injury. Second, all forms of racism mentioned in the definition list, can cause psychological stress. In turn, this stress can have an adverse effect on mental and physical health. Research has namely shown that stress can lead to anxiety, depression, but also cardiovascular disease. Third, unhealthy coping mechanisms may be employed to deal with this stress or self-regulation may be impaired due to this stress. Both favor unhealthy habits such as smoking and alcohol abuse.

Finally, **both conscious, and more importantly unconscious bias from healthcare workers during diagnosis and/or treatment lead to worse health outcomes for racialized patients.** Researchers in the USA found that the neonatal mortality risk is twice as high among black children than white children. However, the risk of a black infant dying is halved if thair doctor is also black. This illustrates the effects of implicit bias on health outcomes. Unfortunately unconscious bias is also present in our country. This article, for example,

addresses the bias of Belgian general practitioners. The study illustrated that their prejudices were the cause of health disparities in patients suffering from depression.

I like to illustrate these impairments in health outcomes by taking the COVID-19 pandemic as an example. A Belgian study found important disparities in mortality, during the first wave of the COVID-19 pandemic. **Overall, men with a migration background had higher mortality rates compared to native Belgians**. Several studies (i.e. Color of COVID-19 and The Racialized Pandemic) have shown how racialized minority groups are systematically at greater risk of exposure to the COVID-19 virus. The reasons for this include their lower socio-economic condition, translated into jobs that do not allow working from home, frequent use of public transport and living with more people in smaller homes. People belonging to these groups are more likely to have generally poorer health for reasons I have stated above. Therefore, they more often have a worse prognosis, prior to a COVID-19 infection, as they suffer from comorbidities like diabetes, cardiovascular diseases, etc. This initial prognosis is taken into account during triage when there are, for example, insufficient ventilators available. Patients with fewer comorbidities who have a better chance of survival are given priority in these situations. Fortunately, it never got that far here in Belgium. As this would actually reinforce the existing inequalities and contribute to the higher mortality rate for COVID-19 infections amongst racially minoritized people.

Besides, a pulse oximeter is often used to measure blood oxygen levels of hospitalized COVID-19 patients. A pulse oximeter is a device placed at the fingertip, which emits light signals and recaptures them after it has passed through the finger. **Research shows that the device overestimates oxygen levels in patients with darker skin tones**. This may have important implications for COVID-19 patients in whom low-normal oxygen saturation is measured. The evidence regarding the inaccuracy of pulse oximeters depending on skin color was already apparent from research published in 2005. Are pulse oximeters calibrated for different skin tones today? And if not, are doctors aware of the incorrect values displayed by the devices?

In the preceding paragraphs, I have made it clear how racism contributes to inequalities in health outcomes. In my opinion, the most important outcome when it comes to health is survival. Therefore, I want to stress that in general the **life expectancy of racialized groups is lower**, even when corrected for socio-economic conditions. Since there are no inherent biological differences between people of different 'races' (see above), racism remains as an important cause of this higher mortality. You can find more in-depth information here.

Other factors besides racism play a role in inequalities in health. **It is crucial not to lose sight of intersectionality**. In fact, everyone exists at a unique intersection of different social axes. These axes include, among others, age, gender, religion, ethnicity, and socio-political ‘race’. These individual characteristics are not merely descriptive, but have an impact on one's experiences and one’s opportunities in life. For example, 2 people who identify as women may experience the same situation completely differently because their ‘race’, socio-economic condition and/or age are not alike. Various disadvantageous positions reinforce each other. For this reason, it is important not to homogenize groups when talking about social problems. Individuals belonging to the same racialized minority group will have some shared experiences when it comes to healthcare, but within this group certain individuals will find themselves in a worse position than others. Therefore, it is important to approach members of racialized minority groups as individuals and not as the representatives of a whole group of people.

Historical context

‘**Races’ are the product of racism and not the other way around.** (Read that again!) Using biological definitions of race today, not in the context of socially racialized people, is racist. To understand this statement, let us go back to the 17th century. In that time ‘races' were established by Western Europeans as a hierarchical categorization system of people to justify colonization, slavery, exploitation and invasion of America, Africa, Oceania and Asia.
The superiority of the white ‘race’ was first explained by theological ideologies: The Christian Church spread the idea that God created physically distinct races. White people were allegedly created in God's image and other races were derivatives and therefore inferior. Later, during the age of Enlightenment, (pseudo)scientific proof was used to demonstrate hierarchy of different biological races. The "inferiority of the black race” was “demonstrated” in various ways. For example, black people were believed to have smaller skull circumferences, which would make them less intelligent.
More information on the history of race can be found here and here.

The idea of black inferiority was reinforced by influential Enlightenment thinkers, like Thomas Jefferson. In 1787 he wrote that forced labor was good for black people since research had shown that they would naturally have inferior lung function. Later, in the 19th and 20th century, research always started from the paradigm that there were inherent biological reasons for differences in lung function. Studies from this period rarely, if ever, took into account the influence of environmental factors such as harmful living environment, physical activity and socio-economic conditions associated with the life of black people. A worrisome fact as these papers are still very influential to this day. In fact, race corrections are still applied for the use of spirometry, a device for measuring lung function.

In the 19th century, experiments were conducted on enslaved people without their consent. At this time, the common belief was that black people would feel less pain, because they were said to have thicker skin and less sensitive nerve endings. During this period, it was shockingly deemed most evident for Dr. J. Marion Sims, “the father of modern gynecology” to perform gynecological procedures on enslaved women without anesthesia. Indeed, he wanted to optimize his technique for vesico-vaginal fistula surgery. To this day, people of color are inadequately treated for their pain, because of false beliefs about pain sensitivity. Here you can find more information about Belgian research investigating racial differences in observers' attention and estimation of others' pain.

Race correction for lung function tests and false beliefs about pain sensitivity are only 2 of many forms of racialization in medicine. The consequences of centuries of racism and a race-based approach in health care are manifold. Race is repeatedly used inappropriately: as a biological essence instead of a social and political construct. For example, biological race is still too often seen as a determinant of health. In addition, it is still frequently used in epidemiological data, diagnostics and treatment, for no valid reason. Moreover, the term ‘race’ is often used without a clear definition or explanation of its alleged relevance. This is problematic because when (biological) race is used in the wrong context, it is racist.

Current situation

Racism is a topic that has recently gained much attention in the medical community.
To illustrate this, I will shed a critical light on interesting evolutions of the past years.

First, recent research regarding spirometry results has taken socio-economic factors into account. These studies show that 'racial' differences in spirometry outcomes can largely be explained by socio-economic conditions and environmental factors such as air pollution, inadequate nutrition, occupational hazards, lung infections, and other exposures. As healthcare workers it is important to always question race corrections while using clinical tools like spirometry: How does it account for the diversity within communities of color? How do people who self-identify as multiracial fit in a single racial box? Who really benefits from these "corrections"? For example, organ function from patients belonging to a certain racial group can get overestimated due to race correction. As a result, these people will have a lower ranking on a transplant list. Is this in favor of the patient?

Second, black people are said to have proportionally greater muscle mass. This leads to higher levels of creatinine in the blood, which is filtered in the kidneys. Therefore, black people would have false high estimated glomerular filtration rate (eGFR) results that would require correction. (More information can be found here and here.) The use of race corrections in eGFR calculation has been questioned for quite some time. In 2021 the National Kidney Foundation and the American Society of Nephrology made the recommendations to remove black race as a factor in the eGFR calculation. But this raises a new question: If the standards for eGFR are based on a population of white people and not the entire population, is it accurate to only remove the correction for black people? Wouldn't it be better to implement new values that take into account the whole population?

Third, the 2021 draft version of the NICE guidelines proposed that women and birthing people of color should be induced earlier than their white counterparts. The reasoning behind this was the fact that people of color are more likely to have higher rates of complications and mortality during and after pregnancy than white people. However, there is no evidence that induction at 39 weeks instead of 41 weeks has a beneficial effect on complications and mortality in this group of people. On the contrary, induction of delivery is a procedure that in turn comes with health risks. The concept version of this guideline insinuated that the cause of higher morbidity and mortality is inherent in people of color. Meanwhile, social factors contributing to inequality were completely ignored. After criticism, the proposal, which only promoted systemic racism, was removed.

Finally, in December 2022, the medical journal, the Lancet, published a series on racial and ethnic equality in science, medicine and global health. In this series, you can find articles that elucidate how "racism, xenophobia, and discrimination (...) cause avoidable disease and premature death among groups who are often already disadvantaged." I believe this is a valuable resource for anyone involved in the health sector, whether as a student, teacher, researcher or healthcare professional. This is the collection of articles we have been waiting for for far too long.

Practical tips

Before I offer concrete tips towards a more 'race'-conscious approach in health care education, I want to emphasize that I don't mean to point fingers at anyone. Instead, I intend to reach out my hand, in order to bring about structural change together. I know from experience that the Faculty of Medicine and Health Sciences at the University of Antwerp is already making several efforts to be more inclusive and to improve their curricula. Moreover, I am sure that other educational institutions are also doing their best to bring about positive change.

First, I invite everyone to engage in **self-reflection and critical thinking**.
Both teachers and students can lead by example. As a member of a teaching staff, it is important to continue to educate yourself, to dare to look beyond your area of expertise and to not avoid social issues. We as students can make our voices heard and ask to address certain topics in class and ask for clarification when 'race' (or any other proxy) is used inappropriately. Every time 'race' (or any other proxy) is used you should ask yourself these questions: 1) What is meant by 'race' (or any other proxy) here?, and 2) Why is it being used here and what is the relevance?

Second, **A 'race'-conscious approach should be applied in every course**. The topic of discrimination should not be limited to subjects teaching about the societal factors within medicine, family medicine, or workshops focusing on communication skills. The educational system is still race-based when, for example in Cardiology classes it is told that ACE inhibitors should not be given to black people, without critical thinking about this nor providing scientific context. In every course we should be challenging the learned associations between (biological) race, on one hand, and clinical findings and differential diagnosis, on the other hand.

Third, **proper terminology must be used**. When making a statement about a particular group, use adjectives instead of nouns. For example, instead of saying "blacks" say "black people" or "black patients". Instead of reducing a particular group to one characteristic, by using adjectives you acknowledge that they are, in the first place, people.

Fourth, **when talking about genetic differences, do not talk about (biological) race, but about ancestry/heredity**. In clinical practice, it is not always possible to examine genetics. Therefore, further research is needed to find better proxies for genetic characteristics that cause differences in predisposition for certain diseases and response to certain drugs. In any case, (biological or socio-political) race is not a good measure.

Fifth, **curricula could use some broadening**. This blog post from the British Medical Journal provides the perfect tips:

- "Teaching the structural causes of racism and inequity;
- Recognizing and addressing 1) privilege, 2) conscious and unconscious bias, and 3) the concept of 'race' as a social construct without genetic basis;
- Recognizing eugenics and wrongs against ethnic minorities and other marginalized people in science and medicine in the history of medicine;
- Diversifying clinical teaching to include clinical signs on darker skin tones;

- Making it an essential professional medical competency to understand and challenge the health effects of structural racism, recognized within the domains of good medical practice."

Sixth, **it is important not to underestimate the power of representation**. Racialized groups flow little into higher health care education. Even fewer of them have a teaching job in health care. Barriers of structural racism that currently impede this flow must be lifted, in order for (para)medical education and clinical practice to become a reflection of society.

Finally, **more research in a Belgian context is needed**. While writing this letter, it was difficult to find sufficient Belgian sources to support my arguments. Studies on 'race' in an American context, on the other hand, are predominant. It is important to be really careful when translating an American study into a Belgian setting, as the current context and history are different. However, since there is currently relatively little evidence in a Belgian context about racial disparities in health, we are often obliged to use the literature available.

Conclusion

Racism is an important cause of health disparities. To tackle these inequalities, we have to address racism. We can only challenge racism when we acknowledge the fact that people are systematically treated differently on the basis of their alleged 'race'. In other words, we need to talk more about 'race' and its social and political implications. With this letter I would like to support this conversation. Of course, we must not just talk about it. We must also take action. I am convinced we can bring long-term structural change in our health care education by working together.