

The Significance of Race-Based Generalizations in Canadian Medical Education

Emma Woo¹

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Abstract

Health outcomes between racial groups vary due to a range of genetic, cultural, and social factors. That said, when medical educators refer to race as a risk for disease, they often do not refer to any of these corresponding factors. As a result, medical education often promotes an essentialist view that both pathologizes race and discourages individualized care. This poses a risk to patients and society of reinforcing false understandings of race as a biological entity. Canadian medical schools should encourage students to think critically about race-based generalizations by delivering transparent and context-specific education.

In a small-group session in my first term of medical school, I was told that when it comes to race, I should “generalize, but not stereotype.” Generalizations in healthcare are instruments of efficiency; they are crude screening tools implemented to help narrow differential diagnoses, stratify risk, and inform treatment. For example, it would be a generalization to put lactose intolerance high on a differential for an East-Asian person with stomach pain, considering there is a higher prevalence of lactase deficiency in this ethnicity. An example of a treatment-informing generalization would be being aware that a Jehovah’s Witness may refuse a blood transfusion due to religious beliefs. Indeed, generalizing can lead to increased diagnostic accuracy as well as a deepened understanding of varied lifestyles. That said, generalizing also groups people into discrete categories and encourages physicians to think about patients as a part of those categories first and as individuals second.

There is a broad body of literature that states that race is a not a biological category.¹ Rather, it is widely agreed upon that racial categories are social constructs, defined by the societies in which they lie. Given this, why does medical rhetoric so regularly group health statistics based on race, and to what effect? What does it mean when physicians say that non-white groups are at higher risk of diabetes or that African-Americans have higher rates of kidney disease?^{2,3}

Undeniably, health outcomes differ between racial groups.^{4,5} There may be poor genetic similarity within groups, but certain ancestral alleles affect disease rates and can be passed down through generations.⁶ For example, 12-13% of African-Americans have two copies of a specific genetic variation in the gene APOL1. This genotype is associated with a four-fold increased risk of developing non-diabetic end stage kidney disease compared to the risk in those without the genotype.⁷ Similarly, absence of the HEXA gene on chromosome 15 is much more common in Ashkenazi Jewish populations than others and leads to the development of Tay-Sachs disease. Perhaps a more common cause for variation is the myriad of social determinants that affect health outcomes. There is strong evidence that factors such as food insecurity, social cohesion, and social support have associations with glycemic control in people with type 2 diabetes.⁸ Other studies link race-based discrimination and hypertension, as well as internalized racism and insulin resistance.⁴ Combined, these genetic and social factors result in a de facto understanding that there are racial differences in disease prevalence and outcome. There is no problem

with acknowledging such differences exist and even making diagnostic decisions based on them. However, a problem arises when physicians use race as a proxy for discussing the factors underlying these differences. After all, genes are not passed down neatly and social determinants do not affect every member of a racial group equally.

I argue that in medicine, generalizing about racial differences can be a form of racial essentialism and should be reviewed critically and minimized when possible. Generalizations based on race as a biological entity are often imprecise and poorly evidenced. They ignore the circumstances of the individual and, in turn, can impact the health of visible minorities. Medical education should be wary of these generalizations and teach students to be critical of their use.

What is racial essentialism?

Racial essentialism is the belief in the existence of discrete, fixed, and uniform characteristics that constitute and differentiate racial categories. The concept of racial essences is not new. It was brought into philosophical discourse in the 18th century as a way of illustrating social hierarchy.⁹ Around the same time, Thomas Jefferson proposed that there were inherent differences in lung capacity between African slaves and white colonists.¹⁰ Ever since, the idea of biological racial differences has been foundational to the medical sciences. Indeed, lung capacity is still considered to vary based on race, despite a global study that showed for the same weight, height, and sex, there is no difference in lung function tests between races.^{11,12} On a societal level, this has the effect of encouraging people to think about races as fundamentally different from one another and therefore not equal. On a patient level, the application of racial essentialism can not only lead to beliefs about fundamental differences in biology, but also judgments from practitioners about fundamental differences in patient behaviours. For example, the generalization that non-white races have higher rates of type 2 diabetes complications may lead some healthcare practitioners to think that these racial groups have poorer lifestyle choices and will be less compliant, and subconsciously show their beliefs in their actions.

Indeed, racial essentialism can perpetuate racial stereotyping. In a study on racial essentialism from 2012, essentialist thinking positively predicted stereotyping, even when controlling for gender and age.¹⁴ This can result not only in overtly racist acts, but also in subtle changes in how patients are treated. Some cases of this involve physicians starting medications at low doses based on race-based disease rates and drug efficacy statistics, and not individual history.¹³

Racial essentialism also affects the practitioner. The same 2012 study showed that essentialist thinking has a common mechanism to

¹MD Program, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada

Correspondence to
Emma Woo (emma.k.woo@gmail.com)

creative stagnation: categorical thinking.¹⁴ In medicine, physicians need categorical thinking to divide concepts into groups and create differential diagnoses. However, more flexible thinking is required when considering the more complex aspects of medical care, including addressing unusual presentations of symptoms or discussing the significance of race. The study showed that essentialist thinking decreased markers of flexibility, association, and insight—all traits that are crucial to quality medical care.¹⁴

What can physicians do?

The adverse effects of racial essentialism do not mean that physicians should ignore racial categories. Paradoxically, to overcome health disparities, the concept of race may even be necessary. How can public health bodies track differences such as access to healthcare and discrimination if they do not acknowledge the categorization upon which these disparities arise? A recent study by sociologist Gerry Veenstra noted the challenge of discovering health outcome mediators due to small sample size. In order to fix this, Veenstra encouraged Statistics Canada to oversample minority populations in future surveys.⁴ The concept of race exists, whether or not it is helpful to society, and medical professionals should pay more attention to it in medical education, not less. The more research done that investigates the details behind differences in health outcomes by race, the less health care professionals will be able to justify broad and unsubstantiated generalizations. Similarly, the more research done that is Canada specific, the less health care professionals will be relying on American data to make possibly inaccurate generalizations.

Another way to be more thoughtful about presenting race-based generalizations is to acknowledge the repercussions of racial essentialism directly and explicitly in curricula. This could mean promoting educational leaders in specific race-based topics such as University of Toronto's "Black Health Lead" and University of British Columbia's "Indigenous Health Lead." Schools can encourage their lecturers to be wary of facile use of race as a bioscientific datum in their presentations and encourage further research into the topic. For example, educators and students alike can try to understand why non-white racial groups have a higher risk of diabetes. In doing so, they would find an extensive range of studies trying to identify the factors at play. This includes studies about the relevance of neighbourhood walkability in determining disease prevalence. It would

also include associations between waist circumference and race, which show that waist circumference has more relevance in predicting diabetes onset in Asian populations than in African-American populations.¹⁵ This type of research takes a small amount of time and makes a big difference in how one treats the idea of race.

One of the UBC Medical Undergraduate Program exit competencies suggests that graduating medical students should be able to "help a patient access ... resources according to [their] unique physical and psychosocial needs."¹⁶ I suggest that medical students should be taught to critically review the use of race-based generalizations to better appreciate the unique physical and psychosocial needs of the individual and not perpetuate harmful racial stereotypes.

References

1. American Anthropological Association. AAA statement on race. *Am Anthropol.* 1998;100:712-3.
2. Spanakis EK, Golden SH. Race/ethnic difference in diabetes and diabetic complications. *Curr Diab Rep.* 2013;13(6):814-23.
3. Tarver-Carr ME, Power NR, Eberhardt MS, LaVeist TA, Kington RS, Coresh J, et al. Excess risk of chronic kidney disease among African-American versus white subjects in the United States: a population-based study of potential explanatory factors. *JASN.* 2002 Sep;13(9):2363-70.
4. Veenstra G, Patterson AC. Black white health inequalities in Canada. *J Immigr Minor Health.* 2016;18:51.
5. Veenstra G, Patterson AC. South Asian-White health inequalities in Canada: intersections with gender and immigrant status. *Ethnic Health.* 2016 Apr;21(6):639-48.
6. Yasuda SU, Zhang L, Huang SM. The role of ethnicity in variability in response to drugs: focus on clinical pharmacology studies. *Clin Pharmacol Ther.* 2008;84:417-23.
7. Kopp JB, Nelson GW, Sampath K, Johnson RC, Genovese G, Ping An, et al. APOL1 genetic variants in focal segmental glomerulosclerosis and HIV-associated nephropathy. *JASN.* 2011 Nov;22(11):2129-37.
8. Walker RJ, Strom WJ, Egede LE. Influence of race, ethnicity and social determinants of health on diabetes outcomes. *Am J Med Sci.* 2016 Apr;351(4):366-73.
9. Zack, N. The philosophical roots of racial essentialism and its legacy. *Con J World Philos.* 2016;1:85-98.
10. Braun L. Race, ethnicity and lung function: a brief history. *Can J Respir Ther.* 2015;51(4):99-101.
11. Quanjer PH, Stanojevic A, Cole TJ, Baur X, Hall GL, Culver BH. Multi-ethnic reference values for spirometry for the 3-95-yr age range: the global lung function 2012 equations. *Eur Resp J.* 2012 Dec;40(6):1324-43.
12. Lujan HL, Dicarolo SE. Science reflects history as society influences science: brief history of "race," "race correction," and the spirometer. *Adv Physiol Educ.* 2018 Apr;42(2):163-5.
13. Weigmann K. Racial medicine: here to stay? *EMBO Rep.* 2006;7(3):246-9.
14. Tadmor CT, Chao MM, Hong YY, Polzer JT. Not just for stereotyping anymore: racial essentialism reduces domain-general creativity. *Psychol Sci.* 2012 Nov;24(1):99-105.