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A Call to Replace Race- and Ethnicity-Based Screening with Health-Related Social Needs Evaluation When Assessing Risk of Type 2 Diabetes in Youth

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Youth-onset type 2 diabetes (T2D), an “awakening epidemic,” has doubled in prevalence in the past two decades and represents a growing threat to adolescent health equity [1]. Compared to their white peers, youth from minoritized racioethnic backgrounds face a higher prevalence and steeper rise in incidence of T2D and a higher risk of severe complications in early adulthood [1]. To facilitate early identification and treatment, the American Diabetes Association (ADA) and International Society for Pediatric and Adolescent Diabetes (ISPAD) T2D screening guidelines use race and ethnicity to risk-stratify children and adolescents [2,3]. Based on the observed racioethnic disparities in T2D prevalence, the guidelines state that racial or ethnic identity as Black, Asian, Native American/Alaskan Native, Pacific Islander, or Latino, alone, is adequate justification to screen youth meeting developmental (age ≥ 10 years or pubertal) and body mass index (BMI) (> 85th percentile) criteria. Therefore, even in the absence of additional individual-level risk factors that could more directly indicate genetic or epigenetic risk (e.g., family history

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of T2D, maternal gestational diabetes) or clinical evidence (e.g., acanthosis nigricans), clinicians are encouraged to screen adolescents for T2D based solely on race and ethnicity.

This use of race and ethnicity to determine medical care is an example of race- or ethnic-based medicine, in which race and ethnicity are treated as biological, not social, attributes to guide medical evaluation and care [4]. Unlike other race- and ethnicity-based guidelines that have clearly detrimental effects for people of color (POC) [4], the intended effect of these T2D screening guidelines is to allow for timely diagnosis to reduce observed racial and ethnic disparities in youth-onset T2D. Nevertheless, the use of race and ethnicity as a decision point may have inadvertent, harmful consequences. As clinicians and researchers who evaluate youth at risk for T2D and who are invested in reducing inequities in the health of children, we note three potential implications of continuing to use race and ethnicity to guide decision-making about T2D screening in youth.

Failure to Identify and Address Underlying Mechanisms of Risk

While race and ethnicity are primarily sociopolitical constructs that do not adequately capture human genetic diversity, racial and ethnic disparities in health exist. These differences are a result of structural racism, which is defined as present and historical policies, laws, and practices that create racial inequity in all sectors of society by allocating resources and opportunities to those racialized as white while limiting access to those racialized as POC [5]. Accepting race or ethnicity as a biological explanation for outcomes threatens to limit progress toward rectifying addressable risk factors, including inadequate access to quality healthcare, food insecurity, poor mental health, language barriers, and physical inactivity due to lack of access to safe, walkable neighborhoods and parks—conditions tied to structural racism.

Perpetuation of Racial and Ethnic Biases

Enshrinement of race and ethnicity as factors to guide screening risks give false confidence to clinical assumptions about type of diabetes (type 1 vs. type 2) at diagnosis. In our clinical experience, we have cared for Black and Latino adolescents with type 1 diabetes who were incorrectly diagnosed with T2D. Assuming a patient has T2D based on their race or ethnicity and body size, without appropriate diagnostic work-up, leads to delays in appropriate treatment, further distrust in the medical system, and long-term poor health outcomes. The reverse may also occur: an adolescent who does not identify as a POC may be incorrectly presumed to have type 1 diabetes without further evaluation, leading to prolonged unnecessary treatment with aggressive insulin regimens.

Misclassification of Risk

As a social construct, racial and ethnic categories are not static and may be difficult to define for certain individuals, such as children of multiple races or ethnicities [6], 60% of whom shift between documented races in the medical record [7]. If a patient is multiracial or multiethnic, as an increasing number of children in the US are, what race and ethnicity

should be chosen when determining whether to screen? Such uncertainties highlight the imprecision of using race or ethnicity as a factor to guide screening decisions.

To avoid missing or delaying the diagnosis among those truly at risk while avoiding expanding screening to an unnecessarily large population of youth, screening must be applied in a way that targets the underlying reasons for identified disparities. Rather than using social identities as proxies, clinicians need a way to operationalize what race or ethnicity represents, which will require a new approach to risk stratification via systematic screening for social and structural determinants of health and health-related social needs. Though clinicians may informally inquire about and document such needs, tools such as the Accountable Health Communities Core Health-Related Social Needs Screening Questionnaire can be used to identify factors related to structural racism that can directly or indirectly increase the risk of T2D in children, including housing instability, food insecurity or barriers to healthful foods, transportation barriers, utility needs, and safety concerns [8]. Notably, adolescents and young adults recognize the potential value of health care providers inquiring about social determinants of health and offering services related to social needs [9]. To maximize benefit while minimizing potential harm of social needs screening, however, programs should be co-created with adolescents, their families, and community-based organizations with the goal of not only identifying but addressing them [10]. In contrast to the typical practice of clinicians simply using their adolescent patients' racial and ethnic identities to guide screening, health-related social needs screening programs could serve to identify and address the true, modifiable factors that increase risk for T2D in youth.

We thus advocate for a *health-related social needs-based*, rather than *race- and ethnicity-based*, approach to screening for T2D in youth, an approach that may also guide screening and management of other chronic diseases with observed racial and ethnic disparities in adolescent health outcomes. Research is needed to define and refine social needs screening as a predictive factor for chronic disease, including youth-onset T2D. Education about the structural factors that create racial and ethnic differences in social needs and ultimately contribute to observed health inequities is critical, including the pervasive impacts of racism and ethnic bias. Clinicians should prioritize history-taking and discussion of identified social needs with families and consider those factors more strongly than race or ethnicity. Without such a paradigm shift, race and ethnicity, rather than racism and ethnic bias, may continue to be identified as primary risk factors for poor health outcomes, limiting progress on efforts to prevent T2D in youth before it starts.

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