Research Week 2020

A Streamlined Approach to Using NIH's Updated Diversity Guidelines in a STEM Enrichment Program

Kristina Nelson, B.A., Adrienne Zell, Matt Honoré

OHSU

Keywords

diversity, STEM, education, evaluation, demographics

Abstract

The National Institutes of Health (NIH) guidelines defining populations that are underrepresented in biomedical research fields have changed four times since early 2018. The most recent guidelines include nine criteria for underrepresentation. To qualify, a person must be from a racial or ethnic minority or have a disability, or meet two of the other seven criteria: experience with homelessness, experience with foster care, eligibility for free/reduced-price lunch, status as a first-generation college student, eligibility for Federal Pell grants, eligibility for WIC, or come from an underserved area. The NIH provides a tool to assess an individual's qualification for only one criterion (i.e., underserved area) of the nine. Without asking applicants directly for extensive and sensitive demographic data, it is challenging to determine whether a person qualifies as underrepresented under NIH guidelines.

Diversifying STEM and providing opportunities to historically underrepresented populations remain national priorities, yet the aforementioned barriers make it difficult to comprehensively define "underrepresented" and then translate those definitions to an actual use case in a way that is not overly demanding of the applicant. For STEM enrichment programs aimed at supporting marginalized researchers, it is especially important to use consistent, inclusive, and minimally intrusive methods when determining if applicants qualify as marginalized.

We used the updated NIH guidelines on underrepresented populations to classify the statuses of 428 undergraduate students participating in a STEM enrichment program (BUILD-EXITO) based at Portland State University. Through simplified data-collection processes, we were able to assess participants on seven of the nine NIH criteria. (The two excluded criteria—eligibility for WIC and free/reduced-price lunch—require more extensive data-collection methods). The resulting streamlined approach can be used in a variety of applications to determine adherence to NIH diversity guidelines. Nuanced instances where neither our algorithm nor NIH guidelines fully identified underrepresented students will also be addressed.