Sam S Oh, Prim Health Care 2018, Volume: 8
DOI: 10.4172/2167-1079-C4-025

Sam S Oh

University of California, San Francisco, USA

Make precision medicine socially precise

Most drugs and genetic tests are developed in populations primarily of European descent, but nearly 90% of the world's population is non-European. As the applications of genomic studies become more widespread, it is critical that the study populations used for genomic discoveries more closely resemble the populations on whom the results are applied. While the vast majority (>80%) of genomic studies have been conducted on populations of European descent, Europeans represent less than 15% of the world's population. Significant problems with drug efficacy and genetic test accuracy can occur if their development is based on genetic patterns that occur more frequently among people of European ancestry. The generalizability of many drugs and genetic tests can be called into question. Since the results of these studies are used to inform policy and drug development, this mismatch in representation has the potential to lead to very poor outcomes. For example, genetic tests for serious diseases may not work in some populations (Manrai et al.), and medicines may fail to deliver their therapeutic effects (Wu et al.). Adopting a one-size-fits-all approach can be myopic. Diversity in biomedical and clinical research is an asset. Ignoring racial/ethnic diversity is a missed scientific opportunity and can translate to poor clinical outcomes.

Biography

Sam Oh serves as the Director of Epidemiology at the UCSF Asthma Collaboratory, where he examines the effect of genetics and environment on asthma risk, severity, and response to medications. He is passionate about resolving difficult public health problems that affect underdog communities that are too often ignored in biomedical research. Racial and ethnic minorities currently make up 40% of the US population yet have been represented in only 4.4% of NIH-funded pulmonary research since 1993. Dr. Oh studies asthma, the most racially disparate common disease.

Sam.Oh@ucsf.edu

Notes: