Contribution ID: **105**   Type: **Paper**

Exploring Racial and Ethnic Diversity Trajectories and Diabetes Prevalence in the U.S.

Thursday, July 18, 2024 11:20 AM (20 minutes)

Over 38.4 million people have diabetes in the U.S. While diabetes is the 8th leading cause of death overall, prevalence varies among racial and ethnic groups. Residential segregation has been shown to be associated with disparities in diabetes rates, however no study has assessed temporal changes in diversity as linked with diabetes rates. This study examines the associations between racial and ethnic diversity trajectories and diabetes at census tract (CT) level across the U.S. Adult diabetes prevalence was obtained from CDC's PLACES dataset. Diversity was calculated using an entropy metric to assess the mix of major races and ethnicities in 2010 CTs using data from 1990, 2000, 2010, and 2020 censuses via the SocScape project. K-means clustering generated 5 trajectory groups. The relationships between trajectory groups and diabetes was examined by a linear mixed model with CTs nested in counties and states, controlling for CT-level measures of age, sex, poverty, marital status, and public insurance. The reference group (cluster 0) was characterized by little change in diversity over time, while other clusters had varying linear or quadratic increasing diversity trends. Compared to cluster 0, clusters with increasing diversity trends were negatively associated with CT diabetes percentage. The lowest overall diversity group shows positive association with a lesser magnitude. Our findings indicate that CTs with increasing racial and ethnic diversity since 1990 see lower rates of diabetes compared to CTs with stagnant levels of diversity. Further work will assess spatial and race/ethnic-specific trends in this relationship.

Keywords: Diabetes, Racial/Ethnic Diversity, Segregation Trajectory, Spatial Analysis

Primary authors: Dr YANG, Jiue-An (City of Hope National Medical Center); Dr TRIBBY, Calvin (City of Hope National Medical Center); Dr DMOWSKA, Anna (Institute of Geoecology and Geoinformation, Adam Mickiewicz University); Dr XIAO, Qian (University of Texas Health Science Center); Dr JANKOWSKA, Marta (City of Hope National Medical Center)

Presenter: Dr YANG, Jiue-An (City of Hope National Medical Center)

Session Classification: Paper Presentations

Track Classification: Health, Justice, Human Rights, Policy & Practice: Health Disparities