



EPIDEMIOLOGY

## SOCIOECONOMIC AND GEOGRAPHIC BARRIERS TO DERMATOLOGY CARE IN URBAN AND RURAL U.S. POPULATIONS

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**Background:** There is an acute shortage of dermatologists in the United States. Access to dermatology is affected by sociodemographic factors such as socioeconomic status, rurality, and distribution of providers. As a result, patients of lower socioeconomic status, and patients residing in rural areas may experience longer wait times, treatment delays, and disease progression.

Limited data is available that examines distribution of dermatologists and dermatology provider supply in the context of population, socioeconomic status, poverty and income levels, rurality, and race. Examining these associations may influence interventions to minimize barriers to care.

**Objective:** Our study identifies geographic and socioeconomic barriers to dermatologic treatment.

**Materials and Methods:** County-specific information regarding U.S. dermatologist locations, dermatologist: population ratios, dermatologist count, population count, poverty status, household median income, rurality, and racial majorities was obtained from the American Academy of Dermatology and U.S. Census Bureau. Variables were assessed in multivariate models using logistic regression analyses.

**Results:** The mean U.S. dermatologist: population ratio is 1.10/100,000. Twelve percent (n= 378) of counties have a dermatologist: population ratio >3.5/100,000. Counties with a ratio >3.5/100,000 have significantly greater populations and median incomes, and have Caucasian-American majorities (97%). A trend was identified ( $r^2 = .970$ ) between a county's median income vs. dermatologist:population ratio. The majority of counties with African-American, Hispanic, and Native-American majorities, and those in rural/frontier areas do not have a dermatologist.

**Conclusions:** Counties with larger populations and in urban areas not only have more dermatologists but also have higher dermatologist: population ratios. In addition, counties with higher median incomes have a higher dermatologist:population ratios. These discrepancies have been reported in other medical specialties. The association between





dermatologist distribution and presence of underrepresented minorities is the most concerning; African American, Hispanic, and Native-American majorities had significantly fewer dermatologists than average, and those with Native American majorities had 0 total dermatologists.

