

# PREVENTING CHRONIC DISEASE

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ORIGINAL RESEARCH: FEATURED ABSTRACT FROM THE  
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## The Spatial Analysis of CVD Mortality in a Tri-county Area of Mississippi

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### PEER REVIEWED

The geographic distribution and spatial pattern of cardiovascular disease (CVD) mortality was investigated in Hinds, Rankin, and Madison counties in Mississippi from 1997 to 2000. The analysis of geographic distribution of disease mortality has an important role to play in public health and epidemiological studies.

The 1997–2000 CVD mortality data in Hinds, Rankin, and Madison counties with residential addresses were obtained from Mississippi vital statistics and geocoded to the census block groups using ArcView software. Because of the small number of CVD deaths in each block group, the geocoded records were aggregated to the related census tract. Kernel density estimator was used to calculate annual CVD mortality for each census tract. A geographically weighted regression method was used to analyze the spatial pattern of CVD mortality in the tri-county area.

For most census tracts, the changes in population density did not explain the changes in CVD death density, suggesting that the high rates were real and not an artifact of population change. The changes in CVD mortality over time were not significant for most census tracts.

These results may be useful in suggesting hypotheses for further study related to environmental factors and socioeconomic status.

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