

Researchers Evaluate Access to Mammography Services in Lower Mississippi Delta Region States

Researchers from the [Rural and Minority Health Research Center](#) (Arnold School of Public Health, University of South Carolina) partnered with the researchers at the University of Illinois Urbana-Champaign and the North American Association of Central Cancer Registries to assess the spatial accessibility of mammography services in the lower Mississippi Delta Region States. With Dr. [Whitney Zahnd](#) as lead author, the team published their paper in [The Journal of Rural Health](#).

With this study, the team aimed to characterize spatial access to mammography services across 8 states in the Lower Mississippi Delta Region – a federally designated, largely rural, and impoverished region with a high proportion of black residents and low mammography utilization rates. They used a geographic information systems method called the enhanced two-step floating catchment area to calculate a spatial accessibility score for each census tract in the eight Lower Mississippi Delta Region states. This method simultaneously considers supply and demand for services with a specified catchment area (e.g., 60 minutes' drive). After calculating these spatial access scores, they compared the scores between Delta and non-Delta regions and conducted a hotspot analysis.

They found no differences in spatial accessibility scores between the Delta and non-Delta Regions, though there was some state-to-state variation. Clusters of low spatial access were found in parts of the Arkansas, Mississippi, and Tennessee Delta. The researchers found that poverty was associated with greater spatial access to mammography.

“The lack of identified differences in spatial access to mammography in the Delta and non-Delta Regions suggests that psychosocial or financial barriers play a larger role in lower mammography utilization rates,” says Dr. Zahnd. “Identifying clusters of low spatial access to mammography services can help inform resource allocation. Further, our study underscores the value of using coverage-based methods rather than travel time or container measures to evaluate spatial access to care.”