

Geographic and Socioeconomic Disparities in Mammography Services Across Northwest Indiana and Chicagoland

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Background

Between 2018-2022, Northwest Indiana (NWI) reported higher breast cancer mortality than the national average, indicating geographic disparities and unmet healthcare needs. Zip codes with greater socioeconomic disadvantage are less likely to have accredited breast imaging facilities. Limited studies have examined the spatial distribution of mammography facilities in NWI. This study examined the spatial distribution and characteristics of mammography services across 7 NWI counties and 4 adjacent Chicagoland counties.

Methods

Mammography facility data were collected from the Food and Drug Administration's Mammography Quality Standards Act (FDA MQSA), American College of Radiology (ACR), and National Accreditation Program for Breast Centers (NAPBC). All mammography facilities must meet FDA standards, with ACR providing higher-level accreditation for multiple breast imaging modalities, and NAPBC granting the highest recognition for comprehensive breast cancer care. Facilities were characterized by setting, services, and certification. Facilities were geocoded and mapped using Google Earth Pro 7.3.6, with US Census overlays for Area Deprivation Index (ADI), % publicly insured, % racial minorities, women aged 40-74, and distance.

Results

Across NWI, 3 out of 7 counties had 1 FDA and/or ACR accredited mammography facility. Communities characterized by higher ADI and public insurance coverage (e.g., Gary, East Chicago, and Hammond) had 1 FDA and/or ACR accredited mammography facility each, with no NAPBC-accredited facility. Contrastingly, lower ADI and % publicly insured communities (e.g., Crown Point, Munster) had higher facility density, including 2 of 4 NWI's NAPBC-accredited sites. Gary and LaPorte had notable differences in racial/ethnic compositions, but both experienced limited mammography access. Chicagoland followed similar trends.

Conclusions

The spatial mismatch between facility access and community needs suggests structural inequities in access to breast cancer services, affecting higher ADI and publicly insured communities. Future research will analyze additional barriers, facility capacity, and inform community-engaged strategies to expand access to comprehensive breast cancer care in underserved communities.