Are National Breast and Cervical Cancer Early Detection Program Recipients Providing Services in Counties Heavily Burdened by Breast and Cervical Cancer?

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Background/Objective

- The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) was established in 1991 to improve access to breast and cervical cancer screening among uninsured and underinsured women.
- NBCCEDP provides breast and cervical cancer screening, diagnostic testing and referrals for cancer treatment to women with low income at or below 250% of the federal poverty level (FPL) and who are underinsured or uninsured.
- To maximize program impact, NBCCEDP clinical services should align with areas experiencing greatest cancer burden.
- Cancer burden is influenced not only by cancer incidence and mortality but also by socio-demographic factors and screening behaviors.

Objective: We developed composite county-level breast and cervical cancer burden scores to determine whether NBCCEDP service delivery was concentrated in clusters of U.S. counties with highest burden between 2015-2019.

Geographic patterns of breast and cervical cancer burden and NBCCEDP service delivery were not fully aligned

- Breast and cervical cancer hotspot counties were primarily clustered in Colorado, Idaho, Nevada, Arizona, New Mexico, and several states within the Southern region of the United States.
- NBCCEDP consistently served a larger percentage of eligible women in clusters of counties with lower cancer burden (coolspots) compared to clusters of counties with greater cancer burden (hotspots) during 2015-2019.
- Recipients can use a composite approach to assess and define their cancer burden.
- Recipients can routinely assess geospatial clustering of cancer burden in their states which may help better prioritize limited resources and increase program impact in high burden areas.

Methods

- This cross-sectional study combined multiple national datasets covering 2015-2019
- County-level breast and cervical cancer burden scores were developed using weighted measures of:
  - Late-stage cancer incidence (45%)
  - Screening underutilization (35%)
  - Poverty prevalence (20%)
- Spatial clustering of burden scores was evaluated using Local Indicators of Spatial Association (LISA) tests
- Differences in service delivery between hotspot and coolspot counties were assessed using independent sample t-test.

Conclusion

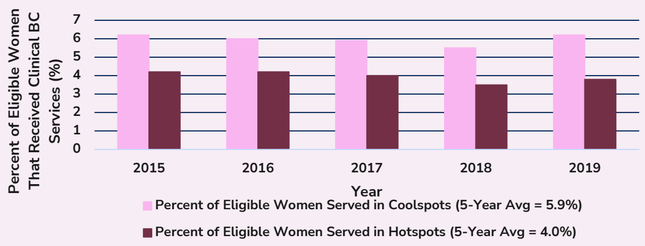
NBCCEDP recipients may improve their impact on breast and cervical cancer burden by prioritizing and consistently increasing service delivery in cancer burden hotspot counties within their states if they have not already maximized their resources in these areas.

Results

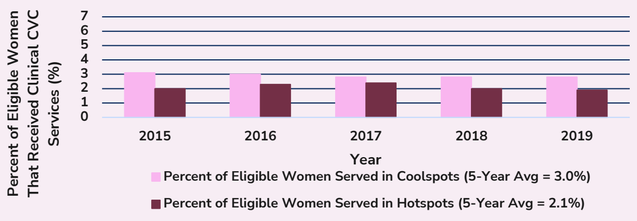
During 2015-2019, a smaller percentage of eligible women received NBCCEDP clinical services in hotspot counties compared with coolspot counties for both breast and cervical cancer.

Annual Percentage of Eligible Women Receiving NBCCEDP Services in Hotspot vs Coolspot Counties, 2015-2019

Breast Cancer

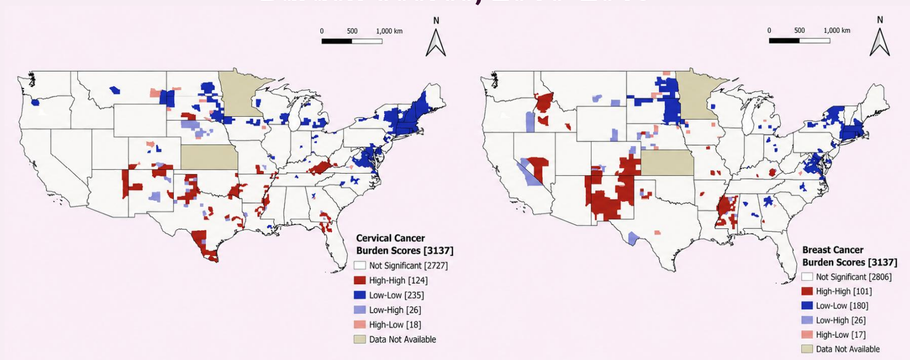


Cervical Cancer



Abbreviations: Breast Cancer (BC); Cervical Cancer (CVC)

Spatial Clustering of Breast and Cervical Cancer Burden Scores, 2015-2019



Footnote: We excluded tribes, tribal organizations, US territories, US-affiliated Pacific Islands, the District of Columbia, Alaska, Hawaii, Minnesota, and Kansas due to insufficient spatial data.

Outcome	Cervical Cancer	Breast Cancer
Hotspot Counties	124	101
Coolspot Counties	235	180
5-Year average % of eligible women served in hotspot counties	2.1%	4.0%
5-Year average % of eligible women served in coolspot counties	3.0%	5.9%



Early detection through screening for breast and cervical cancer can significantly reduce cancer mortality.

References/Acknowledgments

Please see QR code to published article associated with this poster. The authors express appreciation to our colleagues at Information Management Services (IMS) for their support in compiling the NBCCEDP clinical services dataset.

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