2023 NPCR DELAWARE SUCCESS STORY

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Using Delaware Cancer Registry Data to Improve Breast Cancer Outcomes in Delaware

National Program of Cancer Registries SUCCESSSTORY

SUMMARY

Due to Delaware's female breast cancer rates measuring higher than the national average, the Delaware Cancer Registry (DCR) decided to use geospatial analysis to identify areas where more cancer screenings and outreach could be offered through the Screening for Life (SFL) program. These zones were created as part of a previous project to address the need for more sound reporting at the sub-county level. The data from this analysis were used to focus resources and partnerships on communities where they are most needed to reduce the breast cancer burden in Delaware.

SOLUTION

- The registry used geospatial analysis through the National Cancer Institute (NCI)/North American Association of Central Cancer Registries (NAACCR) Zones and census tract data to create two cancer zone maps to identify areas with low breast cancer incidence, but a higher rate of late-stage diagnosis. SFL could focus on these areas for increased screening, outreach, and resources.
- The following groups collaborated: the Cancer Prevention and Control (CPC) Bureau within the Delaware Department of Public Health (DPH) including the Screening for Life (SFL) Program and the Delaware Cancer Registry (DCR). Collaborators were the National Program of Cancer Registries (NPCR) and the National Breast and Cervical Cancer Early Detection Program (NBCCEDP).

CHALLENGE

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- Delaware (136.1 per 100,000 population) had higher rates of female breast cancer than the United States (128.0 per 100,000) during 2015-2019. For the same period, the mortality rate for female breast cancer in Delaware (19.9 per 100,000 per population) was like the rate in the United States (21.2 per 100,000 population). Breast cancer is the leading cause of cancer incidence among women in Delaware and is the second leading cause of cancer death.¹⁻³
- In addition, according to 2015-2019 data, the breast cancer mortality rate for non-Hispanic Black women (27.5 per 100,000 per population) is higher than the rate for non-Hispanic White women (20.5 per 100,000 per population) in the state, demonstrating disparity.1-3 Non-Hispanic Black (36.4%) women were also diagnosed at later stages of breast cancer compared to non-Hispanic White women (28.6%) for 2015-2019.⁴
- Screening For Life (SFL) is a program funded by the National Breast and Cervical Cancer Early Detection Program through the Centers for Disease Control and Prevention (CDC). The goal of the SFL program is to reduce the burden of cancer by providing free screenings for breast, cervical, colorectal, lung, and prostate cancers for those who cannot afford them.⁵

- Additionally, the locations of breast cancer screening providers were overlaid on the maps to analyze the distance that women needed to travel to get a screening. This allowed for recognition of areas that lacked providers. SFL used these data to direct their resources to these underserved locations.
- Overall, the Reporting Zones identified areas of greatest cancer burden but were inadequate at identifying needs at the community level. Instead, census tract data were more meaningful for focused outreach within a few miles' radius.
- This led to collaborations with organizations in communities with limited access to resources.

RESULTS

- The intervention led to considering new partnerships with one of Delaware's largest workforce sectors to focus on Delaware's disproportionately affected populations. This method of geospatial analysis will be replicated with other cancer types to help increase screening rates across the state.
- Using the Reporting Zones, two cancer maps were created to show geographic areas with low breast cancer incidence, but higher rates of late-stage diagnosis.

• The Reporting Zones were helpful in collecting initial information, and mapping at the census tract level provided additional insight into focus areas. The Zone maps were helpful in discovering areas with the highest burden of breast cancer but could not indicate more detailed needs at the community level. However, once mapped at the census tract level, these underserved areas became more specific and realistic for focusing on.

SUSTAINING SUCCESS

• The process for creating these geospatial maps will be replicated for cervical, prostate, colorectal, and lung cancers for the same goal of identifying areas with higher rates of late-stage cancer to help direct cancer screening resources for Delaware.

STORY QUOTE

"The DCR data really served to guide the future of outreach for the Screening for Life program. Using the DCR data combined with geo analysis using census tracts... we can see at a more localized level the percentage of late-stage breast cancer and put boots on the ground to focus education and outreach efforts to communities in those areas. We have established more partnerships with community-based organizations to facilitate outreach."

- An evaluation of the SFL program was needed to identify geographic areas where screening was low.
- SFL-enrolled women mentioned the following factors were barriers to being screened: lack of transportation and access to childcare. As part of this evaluation, the SFL program wanted to ensure that there was adequate health care provider coverage near underserved locations.

Another map was created at the census-tract level to identify more granular focus areas.

- The results identified gaps in cancer screening coverage. This allowed the SFL program to focus on these areas by ensuring adequate access to breast cancer screening was available in these areas and focus on them for continued educational outreach efforts.
- Additionally, the locations of breast cancer screening providers were overlaid on these maps to track areas where patients had to travel farther to reach a provider.
- Community partnerships are hoped to be formed to help increase access to resources and promote outreach.
 For example, to focus on Delaware's large agricultural workforce, a partnership with two poultry processing facilities would be helpful to employees and their families.
- Using the data allowed for more geographically focused distribution of resources and outreach.

– Dawn Hollinger, Cancer Prevention and Control Bureau

REGISTRY CONTACT

Chief, Delaware DPH

Delaware Cancer Registry Homepage https://dhss.delaware.gov/dph/dcr/home.html

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