

# 2020 NPCR CANCER DATA REGISTRY OF IDAHO SUCCESS STORY

STORY TOPIC: Collaboration with NBCCEDP to monitor progress toward health equity goals

STORY CATEGORY: Public Health Impact

STORY TITLE: Using Cancer Data Registry of Idaho Data to Support the NBCCEDP-funded Idaho Women's Health Check Program in Monitoring Progress Toward Health Equity Goals

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## SUMMARY

The Cancer Data Registry of Idaho (CDRI) and the Idaho Women's Health Check (WHC) Program evaluated time from breast cancer diagnosis to treatment among Idahoans enrolled in the WHC program. WHC serves patients that are low-income, uninsured and underinsured women, and that may have limited access to healthcare. This collaborative use of cancer registry and WHC data quantified if WHC patients had disparate experiences in accessing cancer therapy post-diagnosis relative to similarly aged Idahoans who were also diagnosed with breast cancer. The results of these types of analyses allow the WHC Program to enhance and target their services.

## CHALLENGE

In 2017, among female Idaho residents, breast cancer was the most commonly diagnosed cancer (135.9 invasive cases per 100,000 population) and the second leading cause of cancer-related mortality (21.6 deaths per 100,000 population).<sup>i</sup> Idaho has one of the lowest mammography prevalence in the United States, with only 68.2% of women in Idaho aged 50 to 74 years having had a mammogram in the prior two years.<sup>ii</sup> The CDC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP) has funded state health agencies to provide breast and cervical cancer screening to women lacking access to these services. In Idaho, these services are provided via the Women's Health Check (WHC) program, which primarily serves female U.S. citizens or noncitizens who have lived in the United States for  $\geq 5$  years; have incomes up to 200% of the federal poverty guidelines; and have no health insurance coverage for Papanicolaou (Pap) tests or mammograms.<sup>iii</sup> Annual mammogram and clinical breast exam are available to qualifying women aged 50–64 and other age groups meeting additional criteria, e.g. aged 40–49 with personal history of or symptomatic for breast cancer.

Delays in the interval between breast cancer diagnosis and treatment can cause patient distress<sup>iv</sup> and has been associated with decreased survival.<sup>v</sup> For these reasons, NBCCEDP standards are for women diagnosed with precancerous disease or invasive cancer to initiate treatment within 60 days from the day of the final diagnosis.<sup>vi</sup> WHC does not, however, collect information on date of first treatment, making linkages between CDRI and WHC data critical to determining if WHC patients meet NBCCEDP standards. A knowledge gap exists around time to treatment among WHC participants and their demographic and tumor characteristics as compared to other Idaho residents diagnosed with breast cancer.

## SOLUTION

CDRI performs linkages between WHC and its cancer registry data twice per year, which aligns with NPCR and NBCCEDP requirements for routine linkage between programmatic data and state cancer registry data. To identify if the WHC program was meeting NBCCEDP goals and identify areas where WHC might enhance service delivery, CDRI and WHC characterized the time from diagnosis to treatment initiation among the WHC patient population diagnosed with a ductal carcinoma in situ (DCIS) or invasive breast cancer during 2011–2017 relative to similarly aged female Idaho residents diagnosed with DCIS or invasive breast cancer. For these analyses, treatment date was defined as the earliest date for surgery, chemotherapy, or radiation, with radiation needing to be preceded or followed by chemotherapy or surgery.<sup>vii</sup> CDRI and WHC also evaluated characteristics of tumors diagnosed in these two populations and sociodemographic differences between these two patient populations via area-based measures (census tract poverty and urban rural indicator code 2010) determined from the patient's census tract of residence at time of diagnosis. The addition of area-based measures derived from geocoded addresses helps WHC identify gaps in coverage based on geography. CDRI was also keenly interested in ensuring that the methods used for this evaluation would be available to other states, and so we worked with WHC staff to draft and submit a manuscript describing this collaborative use of data.

## RESULTS

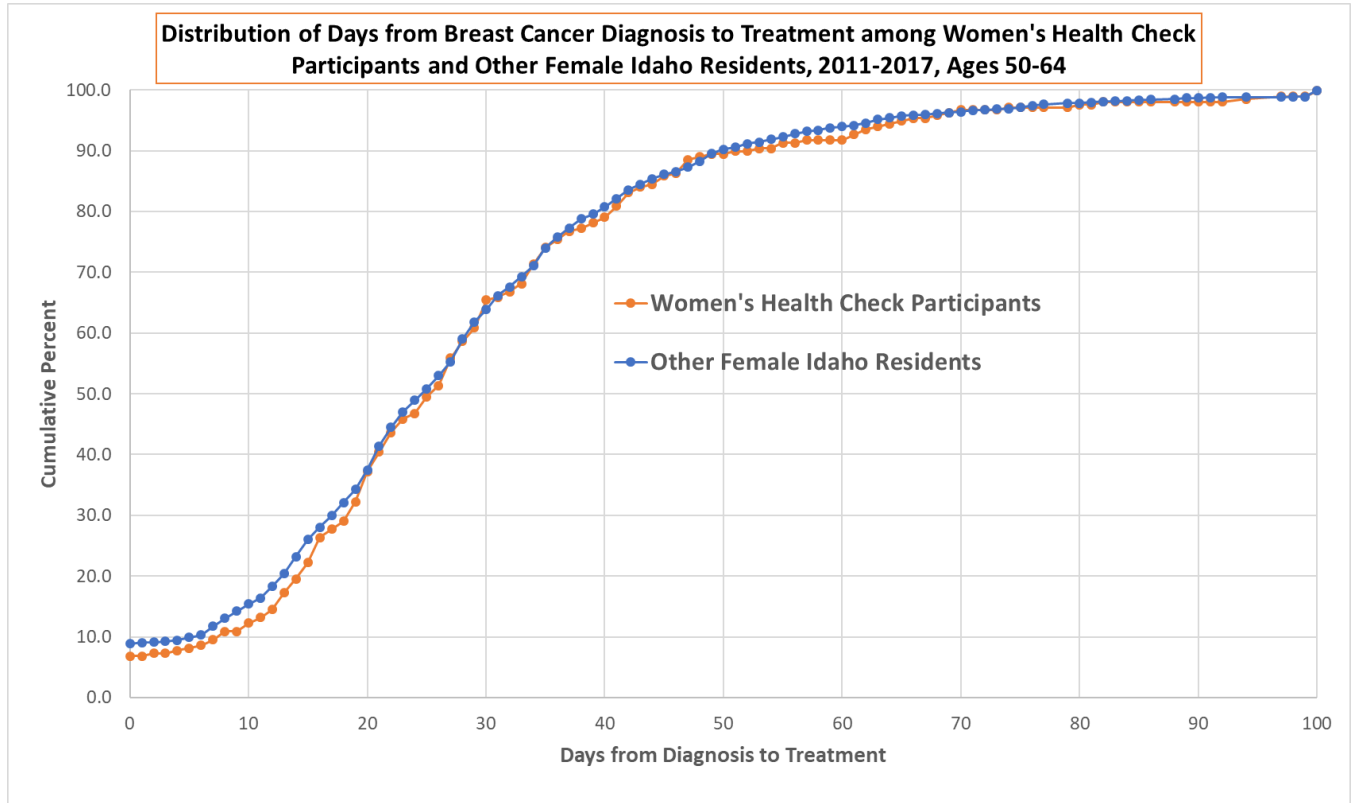
These analyses were key in re-affirming the importance of the WHC Program for Idaho's low income and uninsured and underinsured women. A higher proportion of women with tumors diagnosed via WHC participation were living in a census tract with higher levels of poverty; over 1 in 4 women who participated in WHC lived in a census tract with 20% or greater proportion of households below the federal poverty line, versus 1 in 6 women diagnosed with breast cancer outside of WHC.

Additionally, a higher proportion of women with tumors identified through the WHC program were non-white or Hispanic – 14% of WHC participants were of Hispanic ethnicity and Black, American Indian and Alaska Native, and Asian and Pacific Islander (“other”) versus 7% among Idaho women diagnosed with breast cancer outside of WHC. The distribution of rural versus urban residency at time of diagnosis among women diagnosed with breast cancer through WHC was like that of other Idahoans diagnosed with breast cancer, indicating that WHC outreach to eligible populations was equitable geographically.

These analyses demonstrated that the distribution of stage of tumor at diagnosis was typically later for tumors diagnosed via the WHC Program than other tumors of the breast identified in similarly aged female Idaho residents; 1 in 2 breast cancers diagnosed among WHC participants were regional or distant stage, versus 1 in 3 breast cancers diagnosed among women who were not WHC participants. We also found a lower – albeit not statistically significant – proportion of women diagnosed with HR+/HER2- breast cancer in the WHC-linked group, a breast cancer molecular subtype associated with higher screening intensity and more favorable outcomes. These findings are also expected, as NBCCEDP/WHC is not strictly a screening program, but also serves women who have symptoms suspicious of breast or cervical cancer as confirmed by a health care professional.<sup>viii</sup> Of the 21 distant stage cancers, 14 (66.7%) patients diagnosed were

symptomatic at enrollment (self-reported or found during a clinical breast exam). Also, although a higher proportion of WHC Program tumors were treated with mastectomy, this reflects the later stage of diagnosis among WHC-linked cancers.

Critically, approximately 9 in 10 women – or 92% – were diagnosed with breast cancer through WHC initiated therapy within 60 days of diagnosis. This was like breast cancers diagnosed among other Idaho women, among whom 94% initiated therapy within 60 days of diagnosis. The median number of days from breast cancer diagnosis to treatment initiation was also similar for women diagnosed through participation in WHC versus other women – 26 days versus 25 days – and neither of these comparisons was statistically significant ( $P = 0.28$  and  $0.65$ , respectively).



Idaho WHC covers the cost for local coordinators to assist in scheduling diagnostic testing, encouraging patients to attend scheduled appointments, and if a cancer or eligible pre-cancer is diagnosed, the patient navigator assists the patient in enrolling in breast and cervical cancer Medicaid for treatment. WHC patient navigators work with women until a diagnosis is made, after which the hospital or provider provides patient navigation. The transition to Medicaid that is facilitated by the WHC navigator may be an important component behind similarities in time from diagnosis to treatment among those in the program versus others.

The Idaho WHC Program has been delivering services to eligible Idahoans since 1997 and treatment for breast cancer has been covered for WHC enrollees under a Medicaid waiver since 2001. Results from this evaluation indicate that there are not disparities in the treatment initiation interval between WHC-linked breast cancer cases and other Idaho cases aged 50 to 64. We were not, however, able to assess women's treatment preferences or extenuating circumstances that could delay breast cancer treatment.

## SUSTAINING SUCCESS

To support cancer control efforts in Idaho, CDRI will continue to link cancer registry and WHC data, perform comparisons of WHC cancers to cancers diagnosed outside of the WHC program, and assess patients' clinical experiences and outcomes. These analytic efforts by CDRI help WHC target their programmatic activities to where they are most needed and improve the health of Idaho's under-resourced population. In the future, the CDRI-WHC collaboration could expand to help WHC identify women who did not initiate therapy within 60 days of diagnosis, so that WHC could explore reasons for delay and further improve services.

## REGISTRY CONTACT INFORMATION

Cancer Data Registry of Idaho

Phone: (208) 338-5100; <https://www.idcancer.org/>

## Sources

<sup>1</sup>Johnson CJ, Morawski BM, Rycroft RK. Cancer in Idaho – 2017. Boise, ID: Cancer Data Registry of Idaho, 2019.

<sup>2</sup>BRFSS 2018 Breast Cancer Screening by State.

[https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH\\_BRFSS.ExploreByTopic&irbLocationType=StatesAndMMSA&isIClass=CLASS18&isITopic=TOPIC37&isIYear=2018&rdRnd=37131](https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH_BRFSS.ExploreByTopic&irbLocationType=StatesAndMMSA&isIClass=CLASS18&isITopic=TOPIC37&isIYear=2018&rdRnd=37131).

<sup>3</sup>Idaho Women's Health Check Program.

<https://healthandwelfare.idaho.gov/Health/DiseasesConditions/ComprehensiveCancerControlProgram/WomensHealthCheck/tabid/255/Default.aspx>.

<sup>4</sup>Holland JC, Andersen B, Breitbart WS, et al. Distress management. *J Natl Compr Canc Netw* 2013; 11(2): 190-209.

<sup>5</sup>Khorana AA, Tullio K, Elson P, et al. Time to initial cancer treatment in the United States and association with survival over time: An observational study. *PLoS One* 2019; 14(3): e0213209.

<sup>6</sup>Caplan LS, May DS, Richardson LC. Time to diagnosis and treatment of breast cancer: results from the National Breast and Cervical Cancer Early Detection Program, 1991-1995. *Am J Public Health* 2000; 90(1): 130-4.

<sup>7</sup>Koroukian SM, Bakaki PM, Schluchter M, Owusu C, Cooper GS, Flocke SA. Comparing Breast Cancer Outcomes Between Medicaid and the Ohio Breast and Cervical Cancer Early Detection Program. *J Oncol Pract* 2015; 11(6): 478-85.

<sup>8</sup>Tamer R, Voti L, Fleming LE, et al. A feasibility study of the evaluation of the Florida breast cancer early detection program using the statewide cancer registry. *Breast Cancer Res Treat* 2003; 81(3): 187-94.

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