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# Disparities in cancer screening among women in the United States 

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## Background \& Purpose

- Approximately $25 \%$ of cancer deaths among women are attributed to three main cancer types: breast, cervical, and colorectal (CRC)
- Each of these cancers have 5-year survival rates $\geq$ $90 \%$ when detected at a localized stage
- Unfortunately, national data on cancer screening trends among women have shown that from 20002015 screening for breast and cervical cancer have reduced by $4.3 \%$ and $3.0 \%$, respectively
- In this analysis, we aimed to examine factors typically associated with healthcare utilization to better understand why eligible women may not be up-to-date with cancer screenings for common cancers


## Methods

- The 2018 Behavioral Risk Factor Surveillance System (BRFSS), a population-based nationally representative survey on health behaviors was used for this analysis
- Women who had been screened according to United States Preventive Service Task Force (USPSTF) guidelines specific to each cancer were considered up-to-date
- Sociodemographic factors of interest were age, race, county rurality, income, education, employment, insurance coverage, avoiding medical care due to cost
- Each cancer screening type was considered a separate outcome variable (being up-to-date was the outcome of interest)
- Mixed-effects log-binomial regression models were used to examine the association between selected sociodemographic factors and being up to date with each cancer screening type

Results

Proportion Up-to-Date With Screening By County Rurality


Breast Cancer
(Eligible ages 50-74 yrs) (Eligible ages 21-65 yrs) ■ Metropolitan ■Micropolitan ■ Rural

Proportion Up-to-Date With Screening By Health Insurance Status


Breast Cancer


Cervical Cancer
Colorectal Cancer ligible ages 50-75 yrs)
 (Eligible ages 50-74 yrs) (Eligible ages 21-65 yrs) (Eligible ages 50-75 yrs)


Cervical Cancer
Colorectal Cancer $\square$ Have any health insurance type $\quad$ No health insurance

Proportion Up-To-Date With Screening By Race/Ethnicity



Breast Cancer Eligible ages 50-74 yrs)

- Hispanic/Latino ■ Whit

Results

## Bivariate tests

- Significant differences in the proportion of women being up to date with screenings were also observed by income level, education, employment status, and reporting financial barriers to healthcare


## Adjusted regression analysis

- Compared to White women, Black women had a significantly higher prevalence of being up to date for breast screening (PR 1.10; CI: 1.07, 1.13), cervical screening (PR 1.06; CI: 1.04, 1.08, and CRC (PR 1.07; CI: 1.03, 1.12)
- Compared to women in the highest income bracket ( $\geq \$ 50 \mathrm{~K}$ ) women making $<\$ 25 \mathrm{~K}$ annually had significantly lower up to date screening prevalence for breast (PR 0.93; CI: 0.90, 0.96), cervical (PR 0.94; CI: 0.91, 0.96), and colorectal (PR 0.92; CI: $0.89,0.96$ ) cancer.
- Compared to women with health insurance, women with no form of health insurance had a significantly lower prevalence of being up to date with screenings for breast (PR $0.74 ; \mathrm{Cl}$ : $0.68,0.79$ ), cervical (PR 0.83; CI: 0.79, 0.88), and colorectal cancer (PR 0.61: CI: 0.56, 0.66)
- For CRC screening, compared to women in metropolitan counties, women in rural counties had a significantly lower prevalence of being up-to-date (PR $0.93 ; \mathrm{Cl}: 0.88,0.98$ )


## Discussion

- Efforts to increase cancer screenings among racial/ethnic minority women, especially Black women, appear to be making a positive impact
- Financial factors (income, having health insurance, and avoiding medical care because of cost) are likely consistent barriers for cancer screenings among women in the United States.
- To eliminate disparities in cancer screenings, large scale policy changes are needed to remove financial barriers to healthcare

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