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**Practicum Site:** V.U.M.C./Tennessee Department of Health  
(TN Breast and Cervical Screening Program)

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## ***Age-Related Breast Cancer Screening Utilization Patterns in the Tennessee Breast and Cervical Screening Program***



**Introduction:** Screening mammography guidelines vary amongst organizations, with most recommending screening to initiate between the ages of 40-50. Women at high risk for breast cancer may be eligible for screening at earlier ages. The Tennessee Department of Health's (TDH) Tennessee Breast and Cervical Screening Program (TBCSP) aims to provide screening services for women if they meet certain income and age requirements. This project aims to identify disparities in breast cancer screenings and breast cancer outcomes among different age groups and demographics of women participating in the TBCSP, serving as a review of the program's effectiveness. Understanding breast cancer screening utilization patterns among women in different age groups in the TBCSP can then help with creating tailored interventions to increase screening uptake.

**Methods:** A retrospective analysis on deidentified TBCSP annual patient data from 2017-2023 was used to provide feedback to the TBCSP and to identify demographic characteristics that lead to differences in initial mammogram screening patterns between different age groups. Demographic characteristics are summarized as n (%) mean (SD) as appropriate. Tests for comparison including t-tests and linear regression and logistic regression are used as appropriate.

**Results:** Overall, the TBCSP has continued to increase the number of initial screening mammograms for younger women ages 40-50 years old from 12% of all screenings in 2017 to 40% in 2023, especially in the more populated regions of Tennessee. Of the 13 regions in Tennessee from 2017-2022, Hamilton had the highest increase of initial screening mammograms for 40-50-year-olds (2205.88%), followed by Knox (1707.69%) and Shelby (1089.58%). The Southeast region had a decrease in screenings for 40-50-year-olds (62.5%). These findings could be attributed to population differences, placing a greater need for services in highly populated regions. Participants of Hispanic ethnicity have greater representation in the 40-50-year-old age group.

**Conclusions:** Overall, the TBCSP has effectively increased the number of initial screening mammograms for 40-50-year-olds between 2017 and 2023 in accordance with organization-based recommendations. Future research is needed to understand these trends in age related disparities in screenings, which includes patient interviews (currently under IRB review). Patient interviews will be conducted prospectively and analyzed by two distinct coders on the MAXQDA software. Completing an analysis of qualitative data would help fill the gaps in knowledge about program effectiveness.