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Title

Breast cancer screening during the COVID-19 Pandemic in the United States: Results from real-world health records data

Priority 1 (Research Category)

Big Data

Presenters

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Abstract

Context: The COVID-19 pandemic abruptly interrupted screening for breast cancer, an essential preventative care service in primary care. While earlier studies showed decreases in cancer screening during the pandemic using cancer registry or self-reported data, research assessing the COVID-19 impact over a longer time period using real-world health records (RWHR) remains limited. Objective: To evaluate the impact of COVID-19 pandemic on breast cancer screening utilization and follow-up screening based on RWHR data. Study Design and Analysis: Retrospective cohort study including (1) a descriptive analysis that showed temporal changes in breast cancer screening utilization over time, (2) comparison of follow-up screening rate in pre-COVID and COVID periods, and (3) logistic regression analysis to assess impact of COVID period on follow-up screening accounting for individual demographics, clinical variables, and repeated measures. Setting or Dataset: Individual-level RWHR data from the TriNetX Research Network. Population Studied: Women aged 40-74 years, no prior history of breast cancer, and receiving at least one breast cancer screening between January 2017, and March 2022. Women must have healthcare encounters from at least 2 years before the starting date to the end date of the study period to ensure care continuum throughout the study period. Outcome Measures: Follow-up screening for breast cancer within 24 months of the previous screening. Results: A total of 1,208,827 women were eligible for breast cancers screening through the study period. The screening utilization rate temporarily decreased to the lowest level in April 2020 which was only 19.6% of the level in February, and then rebounded to close to pre-pandemic rates after June 2020. Yet, the rate of follow-up screening within 24 months since the prior screening decreased from 78.9% (95% CI: 77.8-79.0%) in the pre-COVID period to 77.7% (95% CI: 77.6-77.8%) during the pandemic period, with larger decreases observed in older age and Black race subpopulations. Logistic regression also showed that women were less likely to adhere to the 2-year follow-up screening during COVID period with an adjusted odds ratio of 0.907 (95% CI: 0.898-0.917). Conclusion: Impact of COVID-19 pandemic on breast cancer screening was significantly different by demographic subgroups, requiring innovative strategies to address potential health disparities in breast cancer screening adherence in primary care.