

Retrospective Analysis of COVID-19 Pandemic Impact on Breast Cancer Screening Rates in Northwest Indiana

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Background: Few changes to healthcare delivery during the COVID-19 pandemic altered pre-pandemic diagnostic testing as much as those made to cancer screening. Several studies show that screening volumes decreased by as much as 80% across multiple modalities and cancer types in the spring of 2020. These studies examined large hospital systems in the American East and West, but communities with predominantly Black populations like Gary, Indiana, have been absent from this research.

Methods: Our study captures how the COVID-19 pandemic affected access to diagnostic screening for cancerous and precancerous breast lesions through mammography using patient-level data. "Hospital A" provided data from 17,973 mammography encounters that occurred between March 2019 and June 2021. Screening volumes from the eight-week period from March 23rd and May 17th in 2020, the period elective procedures were suspended, was compared to three other distinct periods: the previous 8-week period, the next 8-week period, and the same 8-week period from 2019.

Results: From the 17,973 encounters, the average patient age was 61.7 (SD 11.4) years, 61.0% of patients paid with Medicare or Medicaid, and 66.0% of patients identified as Black. Despite performing a weekly average of 190 (12.3) mammograms during the 2019 baseline period and 158 (16.1) mammograms in the eight weeks preceding the COVID-19 pandemic, the weekly average fell to 13 (22.4) mammograms during the study period with zero occurring in a four-week stretch. Fortunately, volume returned sharply to near pre-pandemic levels in the eight weeks following the study period with 139 (18.9) average weekly mammograms.

Conclusion: Despite a 93% year-over-year decrease in mammography during the height of the pandemic, volume returned in the summer of 2020. Concerning, however, is that average monthly volume (582 (88.5) mammograms) in the first six months of 2021 remains 22.1% lower than 2019 numbers (747 (66.7) mammograms).