

# Enhancing the Electronic Health Record to Improve the Quality of Breast Cancer Care in a Rural Health Care System



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## BACKGROUND

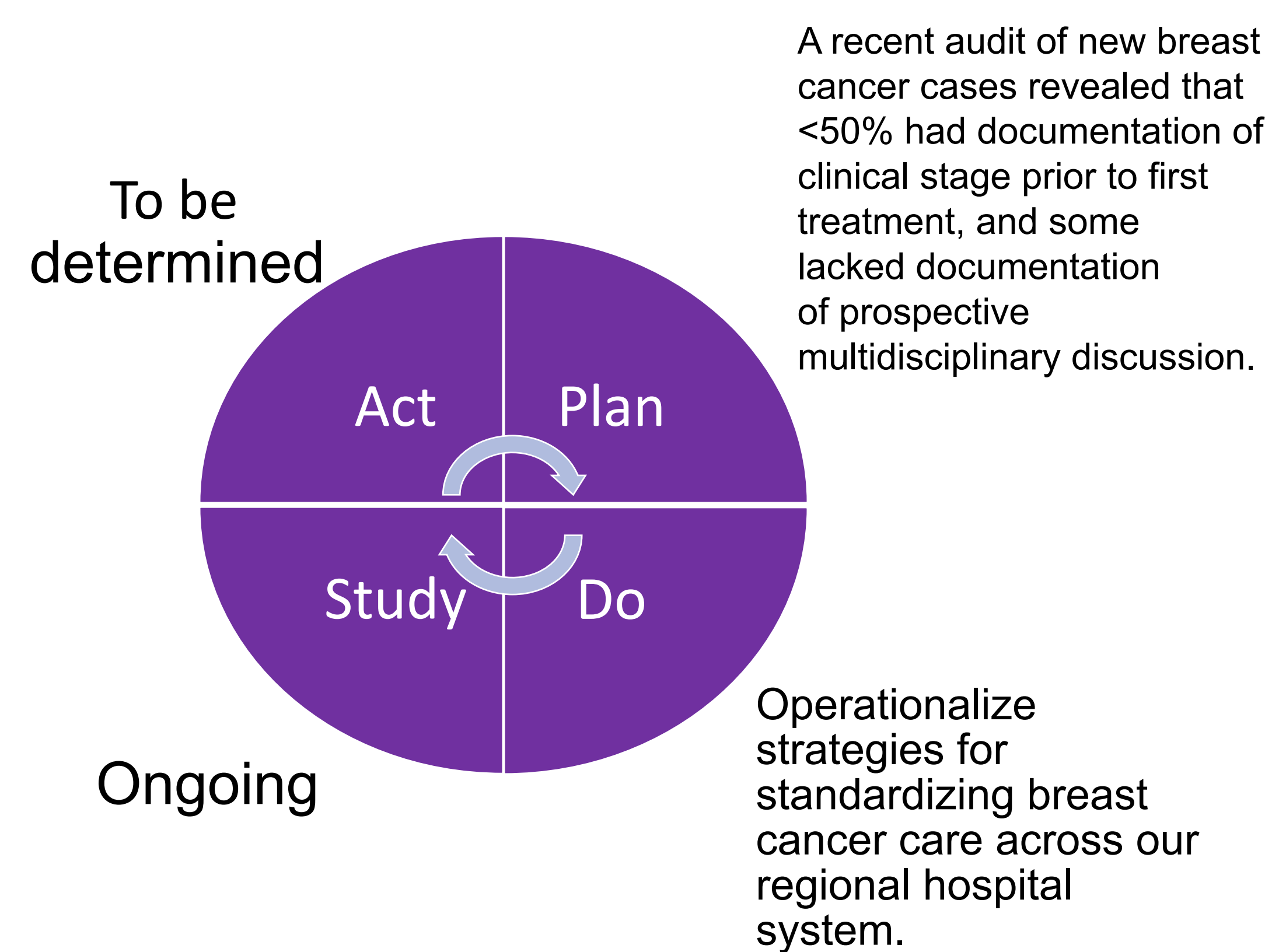
Living in a rural environment is a recognized risk factor for disparate cancer outcomes, even after controlling for possible confounding factors such as race/ethnicity and socioeconomic status. Eastern North Carolina (ENC) is home to an underserved, rural population that suffers from disparities in breast cancer outcomes. Women with breast cancer residing in ENC are more likely to have delays in delivery of adjuvant chemotherapy and have higher rates of breast cancer-specific mortality compared with the rest of the state.

Vidant Health, the regional hospital system in ENC, is uniquely poised to address these disparities by minimizing variation in breast cancer care across its health care settings and thus maximizing quality of care for all patients in the region. As recommended by the American Society of Clinical Oncology (ASCO), evidence-based clinical pathways are an ideal mechanism for improving the quality of breast cancer care in ENC.

## PROJECT DESIGN/STRATEGY

- (1) Engage stakeholders within our regional hospital system via an open invitation to oncology providers.
- (2) By multidisciplinary consensus, develop evidence-based clinical pathways for breast cancer care in ENC.
- (3) Integrate these clinical pathways in to the EHR to improve compliance.

## CHANGES MADE (PDSA CYCLES)



## RESULTS/OUTCOMES

- (1) Medical Oncologists from 5 of 8 institutions (62.5%), Surgeons from 3 of 8 institutions (37.5%), and Radiation Oncologists from 2 of 4 facilities with these services (50%) agreed to participate.
- (2) Across eight stakeholder meetings, minimally accepted compliance standards were agreed upon for individual treatment decisions through the spectrum of care from Workup through Local/Regional, and Systemic Treatments for all stages of disease based on clinical pathways utilizing NCCN and NAPBC Standards.
- (3) Several EHR changes have been made:
  - A standardized Breast Cancer Conference (BCC) Report has been created for patients at the time of diagnosis and at transitions of care (post-operative, post neoadjuvant therapy, time of recurrence) that will allow the categorical collection of BCC recommendations. These templates are comprised of elements which correspond to our clinical pathways, and are thus designed to allow for real-time analysis of variance from minimum quality standards.
  - An EHR alert encourages oncology providers to review the BCC recommendations upon opening a patient's chart to improve compliance with clinical pathways.

## LESSONS LEARNED

Initiation of this project required convincing key stakeholders of the relative advantage of compliance with clinical pathways in breast cancer care. As our results demonstrated, participation was achieved by all subspecialties in the development of a Breast Cancer Standards and Pathways document. However, the challenge of spreading change across the entire Vidant system remains.

Other potential challenges that may have to be addressed as this project moves forward include whether the EHR enhancements are compatible with current work flow, and the ability to measure and report compliance in a timely fashion.

## NEXT STEPS

- Record quality metrics in real-time during BCC starting in January 2019.
- Evaluate the impact of this project on compliance by comparing pre-implementation quality metrics to those measured in the first 3 months of 2019.
- Re-evaluate established compliance standards with stakeholders.
- Implement these EHR enhancements across the Vidant system.

## PROJECT AIM

The overall goal of this project is to assure that women have the opportunity to receive safe, timely, patient-centered, evidence-based and efficient care for their newly diagnosed breast cancer within their geographic community health care systems. We hope to accomplish this overall goal by integrating evidence-based clinical pathways into our regional hospital system's EHR.

## RESULTS/OUTCOMES (CONT.)

Thus far, we have studied the historical compliance with breast cancer clinical pathways in ENC. We reviewed 435 new breast cancer cases diagnosed in 2016 and 2017 to evaluate compliance with several key quality metrics.

Quality Metric	Minimum Standard	Observed Rate
Prospective Presentation at BCC Documented	85%	56.5%
Clinical Staging Documented Prior to First Treatment	100%	58.2%
Family History Documented	100%	94.3%

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