BACKGROUND

Breast cancer (BC) is the most common cancer in eastern NC, just as it is in America. We have for many years had worse outcomes in our 29-county region due to many factors, including an inherently higher risk population. We performed a pilot study on our local population at the Outer Banks Hospital, which is a community member of the Vidant Medical network, in order to assess and model this rural risk which we believe to be high. The hypothesis we hold is that if we can model the risk and offer better targeted screening and prevention, we can lower the disparity in breast-cancer related outcomes in the 29-county region we serve.

PROJECT AIM

Our goal with this study was to pilot an innovative model within ENC to assess this risk, and stratify the risk for women using evidence-based guidelines. We hope to examine this model after 1.5 years to see what impact it has had, and to duplicate this model within the larger network of Vidant.

Using a critical access point in the at-risk population, we aim to introduce a risk assessment tool to establish the cancer risk and use that information to help guide screening. The hypothesis is that some of these risks are modifiable through lifestyle modification, and some are not (e.g. family history and genetics), but they are all modeled using evidence-based tools available nationally.

PROJECT DESIGN/STRATEGY

We aim to add services to accommodate these increased rural needs, including 1) genetics risk assessment clinic, 2) a risk modification clinic, and 3) a “high risk” clinic to follow these women who are at elevated risk and offer customized management.

We plan to pilot this at a V-COM hospital (TOBH) first, then replicate it to other V-COM hospitals in the Vidant network to improve screening within Eastern North Carolina for Breast Cancer. We used PDSA approach with monthly review of data.

Based on the pilot data from TOBH we present here, we should be able to predict the needs for the system and estimate the impact on the Vidant Network in BC care.

Our long term aim is to reduce the later stages of presentation of cancer by offering more appropriate screening, and prevent cancer by mitigating the risks in patients with above-average risk factors.

RESULTS/OUTCOMES

Annual population of 4500 women screened at intake point of mammography. We compared results prior to improvement with post-intervention. No women were being formally assessed for BC risk prior to this pilot. Within rural screening radiology population, 1/6 women are at increased-risk for BC, defined by lifetime risk ≥ 20%. One in five unaffected women (>20%) in screening population met NCCN guidelines for hereditary testing. Using this model of intervention in a population with elevated risks is helpful to identify areas of opportunity to improve rural outcomes.

PROJECT DESIGN/STRATEGY

Assess Population Risk for Breast Ca

<table>
<thead>
<tr>
<th>Tool</th>
<th>High</th>
<th>Intermediate</th>
<th>Low</th>
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<tbody>
<tr>
<td>1. Tyner-Crick</td>
<td>n/a</td>
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<tr>
<td>2. Genetic Risk</td>
<td>n/a</td>
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Evaluate previous BC (N=32)
Exclude too old (N=15)
Refused (N=8)

Stratify Risks

| N=444 |
| Future ID |
| No change in management |

Planned PDSA cycles

RESULTS/OUTCOMES

Percentage Meeting Criteria for Germline Testing

- Low-normal average
- High risk
- Very high

Outcome

- N=4160
- Increased risk for BC, defined by lifetime risk ≥ 20%
- One in five unaffected women (>20%) in screening population met NCCN guidelines for hereditary testing.

This model for improving BC risk assessment and testing at small community cancer-credited hospital was successful and addressed a rural need. We discovered high rate of increased-risk women, and high percentage of women who need genetic testing. A next step with this is to employ the tool in primary care setting locally, and duplicate it elsewhere in the Vidant network. We implemented clinics to help address this need, and we anticipate the long term effects will be to lower the (breast) cancer risks rurally.

ACKNOWLEDGEMENTS

This model developed as an extension of a grant from Pfizer and the Association of Community Cancer Centers to increase BRCA testing.

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