

Evaluation of The Effectiveness of an On-site Referral System to Increase Mammography Screening Compliance: Scoping Review

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Purpose

According to the American Cancer Society, when breast cancer is detected early and is in the localized stage, the 5-year relative survival rate is 99% (American Cancer Society, 2021). However, women residing in rural communities have a lower breast cancer survival rate than the general population (Leung et al., 2014). The rural population is saturated with barriers inhibiting secondary prevention of breast cancer (Leung et al., 2014). Therefore, it is no surprise that mammography screening rates in rural areas are reportedly lower than in urban communities (Percefull & Butler, 2020). This finding is attributed to disadvantages such as low income, no health insurance, and decreased health literacy (Davis et al., 2012). The significance of this scoping review is to identify a rural health disparity amongst women who qualify for routine mammography. Our search can be narrowed to unveil effective interventions to improve breast cancer screening compliance in rural populations with this understanding.

Background

- Less than 50% of women adhere to mammogram screening guidelines.
- Less than 50% of women take the initial step to get a yearly mammogram screening.
- This percentage continues to dwindle as the steps in protocol/ further identification progress.
- Although the proper tools and education have been supplied and/or is available, the compliance rate for mammogram screening could still be improved.
- This leads to the questions, what more can be done? How can we assure a better compliance rate and increase the survival rate of early identified, breast cancer?
- We have developed a method for primary prevention for a disease process that can quickly progress to something detrimental and potentially terminal.
- As providers we are continually addressed with the challenge of non-compliance, this is not to determine that this patient population is laissez fair when it comes to their health but, to acknowledge the fact that the rural population is saturated with barriers making the goal in achieving an overall healthy baseline an everyday challenge

• The significance of this research is to identify if there is room for an improvement and a way to ease the burden of the difficulty and access to care and routine screenings. Does taking one step forward and making the referral for the patient have a positive correlation with the patient's compliancy and capability of having the screening done? Through this research, the intent is to identify the efficacy of increased mammography screening compliance in alignment with an increase in primary care provider referral rate. The question presenting itself is, do we see an increase in the compliance to screening when the primary care office is making the referral for the patient and is the ratio of people referred to those being screened statistically significant

Methods

Eligibility Criteria

- Published in a peer-reviewed journal published between 2000-2021
- Addresses screening compliance in rural communities

Information Source

- The University of Tennessee Health Science Center online library

Search Terms

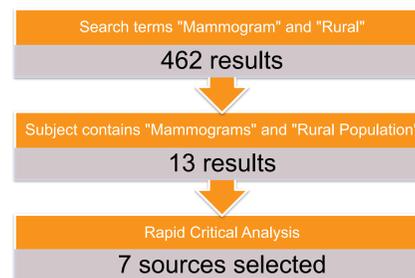
- "Mammogram screening in rural areas"
- "Health care disparities in rural areas"
- "Secondary prevention in rural versus urban communities"
- "Healthcare in rural versus urban communities"
- "Rural communities' effect on breast cancer screening"
- "Compliance to mammogram screening in rural areas"

Selection of Sources

- Evaluation of the articles: descriptions, collecting methods, level of evidence, results, strengths, weaknesses, and limitations
- Annotated Tables created for article evaluation by each author

Data Charting

- A Microsoft Excel file was used to compile and categorize data
- Level of Evidence Synthesis and Outcome Synthesis Tables were used to display data



Results

Level of Evidence

- Cohort Study (N=5)
- Randomized Controlled Trial (N=1)
- Systematic Review (N=1)

Topics Addressed

- Mammography Rates (N=6)
- Health Literacy (N=5)
- Proven Rural Health Disparity (N=5)

	1	2	3	4	5	6	7
MR	✓	✓	↑	↑	↑	✓	↑
HL	✓	NE	✓	↑	NE	✓	↑
PRHD	↑	↑	NE	✓	✓	↑	NE

SYMBOL KEY
 ↑ = Increased, ↓ = Decreased, — = No Change, NE = Not Examined, NR = Not Reported, ✓ = applicable or present

LEGEND
 MR= Mammography Rates
 HL=Health Literacy related to mammography screening
 PRHD= Proven Rural Health Disparity

1 = Davis, T.C., et al. (2012); 2 = Leung, J., et al. (2014); 3 = Davis, T.C., et al. (2014); 4 = Wu, T.Y. & Lee, J. (2019); 5 = Lee,

Implications for Practice

- Information from this scoping review show rural health disparities and demonstrates effective interventions to improve mammography rates for women who live in rural populations.
 - Implementation of referral programs
 - EMR reminders for providers
 - Education on importance of mammograms
 - Community outreach programs
- Access to care is one of the main barriers for women in rural populations. With the implementation of these interventions, the compliance rate with mammograms can be improved.

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